BC Timber Sales
Prince George Business Area

Prince George Forest District

BCTS
BC Timber Sales
Prince George Business Area

FOREST STEWARDSHIP PLAN

September 30, 2005

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1 INTERPRETATION

1.1 Definitions

In this FSP:

"Agreement Holder" means the holder of a Timber Sale Licence or Road Permit granted by the TSM to which this FSP applies.

"Commencement Date" means the date the Term of this FSP begins, as specified in Paragraph 2.3.

"FDU" means the forest development unit under this FSP.

"FPC" means the Forest Practices Code of British Columbia Act RSBC 1996, c 159.

"FPPR" means the *Forest Planning and Practices Regulation*, as amended from time to time.

"FRPA" means the *Forest and Range Practices Act*, SBC 2002, c. 69, and applicable regulations made thereunder, as amended from time to time.

"FSP" means this Forest Stewardship Plan.

"GAR" means the Government Action Regulation, as amended from time to time.

"Submission Date" means the date specified in Paragraph 2.1.

"Term" means the period specified in Paragraph 2.2.

"TSM" means the Timber Sales Manager for the BC Timber Sales' Prince George Business Area.

1.2 Tenses

In this FSP, the singular includes the plural and the plural includes the singular, unless the context indicates otherwise.

1.3 Definitions under Acts

Unless otherwise expressly indicated, or indicated by context, terms used in this FSP have the definition given them in FRPA and the Forest Act and the regulations under them.

2 SUBMISSION DATE, TERM AND COMMENCEMENT DATE OF THIS FSP

2.1 Submission Date

The date of submission of this FSP is September 30, 2005.

2.2 Term

The Term of this FSP will be 5 years beginning on the Commencement Date.

2.3 Commencement Date

The Commencement Date for the Term of this FSP is the date the FSP is approved.

3 APPLICATION OF THIS FSP

3.1 FSP Holder

The holder of this FSP is the TSM.

3.2 Application of FSP

This FSP applies to:

1. (a) a timber sales licence advertised and entered into by the TSM to which Section 3(1) of FRPA does not apply; and

   (b) a road permit granted by the TSM to a person holding a timber sales licence referred to in subparagraph (a),

   that is within the FDU and that comes into effect on or after the Commencement Date of this FSP.

2. an access road constructed by the TSM to an area to be harvested under a timber sales licence referred to in paragraph 1.

4 FOREST DEVELOPMENT UNIT

The FDU for this FSP incorporates all of the BCTS operating areas shown as a FDU in Figure 1 and the FSP Forest Development Unit Map in Appendix B and incorporates:

- cutblocks that are subject to a timber sale license issued by the TSM;
- roads that are subject to a road permit issued by the TSM;
- FRPA 196(1) and 196(2) cutblocks; and
- FRPA 196(1) and 196(2) roads.

In addition, the FDU for this FSP incorporates:

- FRPA 196(1) and 196(2) cutblocks; and
- FRPA 196(1) and 196(2) roads

that are located outside of and separate from the BCTS operating areas. These areas are shown on the FSP Forest Development Unit Map in Appendix B.

4.1 Items Identified in the FDU

Appendix B shows the location of the following items that were in effect on the Submission Date:

1. Ungulate winter range areas, wildlife habitat areas, fisheries sensitive watersheds, lakeshore management zones (as established by the Government Actions Regulation), scenic areas, L1 lakes, community watersheds, old growth management areas, and areas where commercial timber harvesting is prohibited by an enactment.
2. The areas within the FDU that are subject to a timber sale licence, or a road permit granted by the TSM.

Table 1 lists the areas within the FDU that are subject to a road permit granted by the TSM.

Table 1. Road Permits In Effect on the Submission Date.

Road Permit Number	Road Permit Number	Road Permit Number
R08072	R13353	R14486
R09682	R13933	R14525
R10432	R14260	R14528
R11212	R14289	R14635
R11557	R14336	R14662
R12538	R14340	R14771
R12859	R14370	R14796
R13019	R14452	R14885
R13275	R14462	

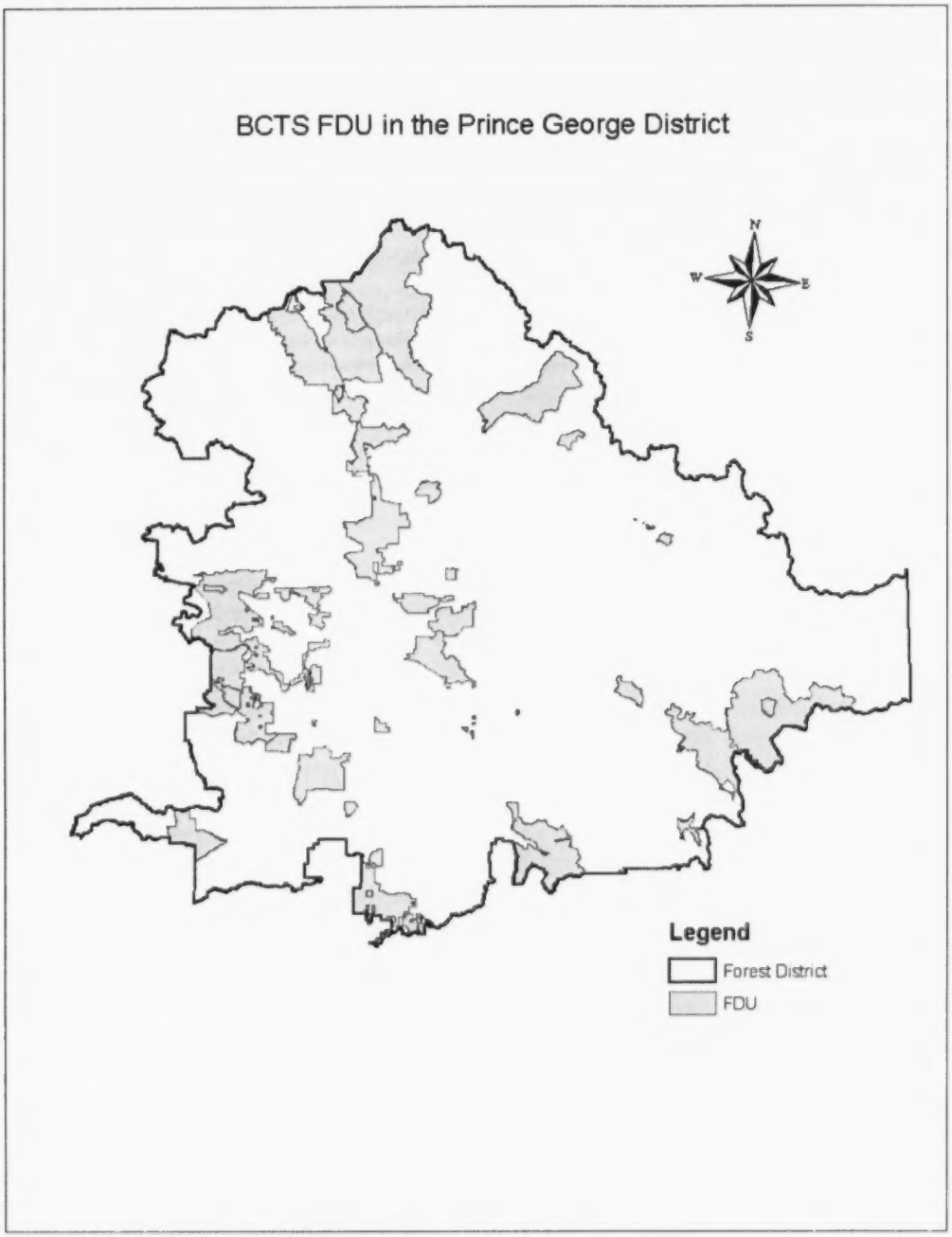


Figure 1. BCTS Forest Development Unit (not to scale).

5 RESULTS OR STRATEGIES

All results or strategies are applicable across the entire FDU.

5.1 Objectives Set by Government

5.1.1 Land Use Objectives

5.1.1.1 Landscape Biodiversity Objectives for the PG TSA

Legal Reference: Order Establishing Landscape Biodiversity Objectives for the Prince George (PG) Timber Supply Area (TSA) (dated October 20, 2004) established under section 4 of the FPC.

The holder of this FSP is a *participating licensee* in the PG TSA Licensees' Memorandum of Understanding on the Order Establishing Landscape Biodiversity Objectives for the PG TSA.

For the purposes of this result or strategy, the following definitions apply:

Ecological unit: The unit of measurement of the old forest, old interior forest and young forest patch size, as described in the Order Establishing Landscape Biodiversity Objectives for the Prince George (PG) Timber Supply Area (TSA).

Old Forest: As defined in the Order Establishing Landscape Biodiversity Objectives for the Prince George (PG) Timber Supply Area (TSA).

Old Interior Forest: As defined in the Order Establishing Landscape Biodiversity Objectives for the Prince George (PG) Timber Supply Area (TSA).

Young Forest: As defined in the Order Establishing Landscape Biodiversity Objectives for the Prince George (PG) Timber Supply Area (TSA).

Participating licensees: Those licensees defined as signatory licensees in the PG TSA Licensees' Memorandum of Understanding (the MoU) and include: the holder of this FSP as well as forest licensees and the TSM's for BC Timber Sales Business Areas, not covered by this FSP. These signatories have agreed to participate in collaborative management of the old forest, old interior forest and young forest retention requirements for the purposes of this objective.

Result or Strategy

The following results or strategies apply to the holder of this FSP, which are consistent with the MoU:

1. Except for instances of 2., the holder of this FSP will participate in maintaining greater than or equal to the target percentage of *old and old interior forest*, for the area in the *ecological unit*.
2. If an ecological unit is deficient in *old forest or old interior forest* for the area of *participating licensees (*as described in the MoU), the holder of this FSP, will not award new timber sale licences, until the unit has achieved the minimum amount of *old* or *old interior forest*; or a recruitment strategy has been approved for the unit by the Ministry of Sustainable Resource Management (MSRM) or such other agency of government responsible for this objective.
3. The holder of this FSP will participate in managing *young forest* toward the target patch size distribution, as measured from the Commencement Date to the expiry date of this FSP, with the other *participating licensees* in the *ecological unit*. Where a trend toward the target cannot be achieved, the holder of this FSP will participate in providing the

appropriate government agency with a rationale for the trend away from the target and provide a strategy for how the objective will be achieved in the shortest time as is practicable.

Scale of Measurement: Natural Disturbance Unit (NDU) / Merged Biogeoclimatic (BEC) units for old and interior forest, NDU / Forest District for young forest patch size distribution.

Map Reference: Appendix B: Reference map 1 identifies the NDU zones, reference map 2 identifies the merged BEC units for the PG District.

5.1.1.2 Landscape Units

Legal Reference: Established under FPC 4(1) and (2): Dome and Slim Landscape Units - October 31, 2002; Humbug Landscape Unit - August 1, 2003.

Result or Strategy

The holder of this FSP will not carry out new harvesting or road construction within the Old Growth Management Areas (OGMAs) established in the Dome, Slim, and Humbug LUs within the FDU of this FSP.

Scale of Measurement: Each OGMA.

Map Reference: Appendix B: Reference map 3 highlights the OGMAs within the PG Forest District.

5.1.2 Objectives Prescribed under Section 149(1) of FRPA

5.1.2.1 Objectives Set by Government for Soils

Legal Reference: FPPR Section 5 and 12.2.

Result or Strategy

Sections 35 and 36 of the FPPR are a result or strategy that applies to the holder of this FSP and to each Agreement Holder.

Scale of Measurement: N/A.

Map Reference: N/A.

5.1.2.2 Objectives Set by Government for Wildlife

Legal Reference: FPPR Section 7.

For the purposes of this result or strategy, the following definitions apply:

"Mountain Caribou Recovery Implementation Group" means the representatives from provincial government agencies and specific stakeholders who develop objectives to effect recovery of the northern population of woodland caribou within the Southern Mountains National Ecological Area, the arboreal lichen-winter feeding ecotype.

"Northern Caribou Recovery Implementation Group" means the representatives from provincial government agencies, forest companies, First Nations, trappers, guides and interested

stakeholders who develop objectives to effect recovery of the most northern local populations of woodland caribou within the Southern Mountains National Ecological Area; the terrestrial lichen-feeding ecotype.

Result or Strategy

The following results or strategies for Mountain Caribou apply to the holder of this FSP and to each agreement holder.

1. Until such time as the Mountain Caribou Recovery Implementation Group has completed habitat range maps and objectives, and Mountain Caribou research data is available in a digitally accessible format:

   a) prior to harvest of a cutblock or construction of a road within 5 kilometres of a Mountain Caribou ungulate winter range and above 1100 metres, a qualified professional will conduct a Mountain Caribou field evaluation. The evaluation will assess and develop recommendations for management of calving sites, rutting areas, connectivity and / or mineral licks located within the cutblock or within 200 metres of roads and cutblocks; and

   b) forest practice activities will be consistent with the Mountain Caribou field evaluation recommendations.

The following results or strategies for Northern Caribou apply to the holder of this FSP and to each agreement holder.

1. Until such time as the Northern Caribou Recovery Implementation Group has completed habitat range maps and objectives:

   a) prior to harvest of a cutblock or construction of a road within the Colburn and Reynolds creek watersheds, the holder of this FSP will work co-operatively with the Ministry of Environment (MoE) to determine if Northern Caribou are utilizing habitat within the cutblock or within 200 metres of the road or the cutblock.

2. If Northern Caribou are not using the area in and around those roads and blocks identified in paragraph 1, no further action is required.

3. If Northern Caribou are using the area in and around those roads and blocks identified in paragraph 1:

   a) a qualified professional will conduct a Northern Caribou field evaluation prior to harvest of the cutblock or construction of a road. The evaluation will assess and develop recommendations for management of calving sites, rutting areas, connectivity and / or mineral licks located within the cutblock or within 200 metres of roads and cutblocks; and

   c) forest practice activities will be consistent with the Northern Caribou field evaluation recommendations.

Scale of Measurement: FDU.
Map Reference: N/A.

5.1.2.3 Objectives Set by Government for Water, Fish, Wildlife and Biodiversity in Riparian Areas

Legal Reference: FPPR Sections 8 and 12.3.

Result or Strategy

Sections 47 to 51, 52(2) and 53 of the FPPR are a result or strategy that applies to the holder of this FSP and to each Agreement Holder.

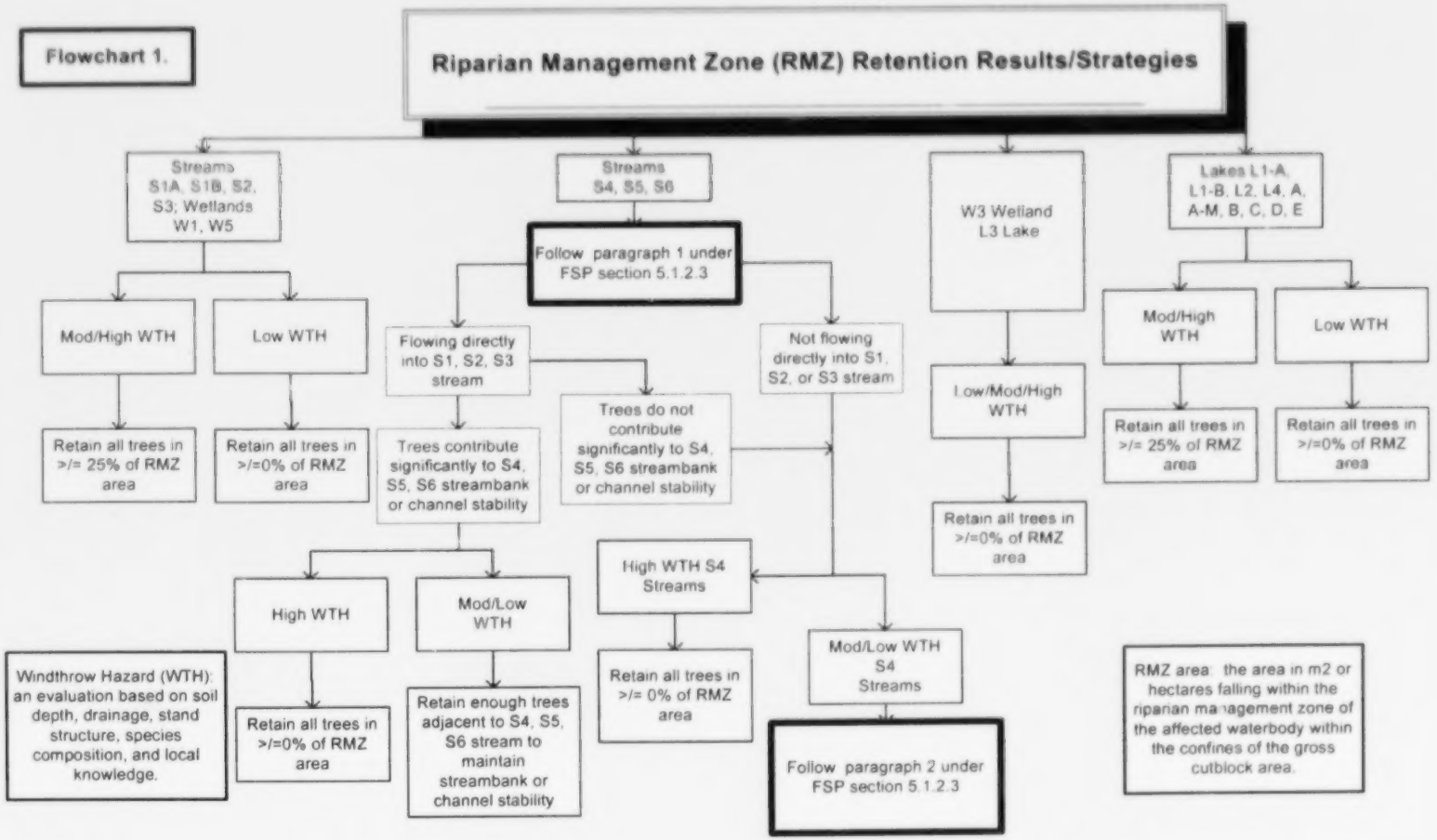
For the purposes of section 12(3) of the FPPR, the result or strategy for retention of trees in riparian management zones that applies under this FSP to the holder of this FSP and to each Agreement Holder is described in Flowchart 1.

Paragraphs 1 and 2 below are subordinate to Flowchart 1, and apply in specific circumstances only as outlined in Flowchart 1.

1. Within 5 m of all S4, S5 and S6 streams, retain brush species, advanced regeneration, non-merchantable conifers, and non-commercial stems unless:
   a) establishing a stream crossing;
   b) carrying out hand falling;
   c) carrying out cable or aerial yarding across or adjacent to the stream (including guyline or skyline clearance);
   d) removing trees to address a safety concern; or
   e) conducting manual brushing to release crop trees from competing vegetation, wherein efforts will be made to conduct the minimum amount of brushing required to meet silviculture obligations.
2. Within 10 m of all S4 streams having a moderate or low windthrow hazard and not flowing directly into an S1, S2, or S3 stream, retain over the length of each stream within the cutblock, an average of not less than 10 overstory trees per 100 m of stream length, on either or both sides of the stream, unless:
   a) the trees to be retained are:
      i) infested or diseased by a forest health agent that would spread if the trees were not removed;
      ii) within the right-of-way of a stream crossing; or
      iii) within 5 m of either side of a skid crossing;
   b) there is less than 10 overstory trees within 10 m of the stream, in which case all overstory stems within 10 m of the stream will be retained;
   c) there is less than 10 overstory trees within 10 m of the stream due to the necessity of removing danger trees, in which case all overstory stems within 10 m of the stream will be retained, except those removed as danger trees; or
   d) the stream is located within a harvest unit that is being harvested by cable or aerial yarding system (including guyline or skyline clearance).

Scale of Measurement: N/A.
Map Reference: N/A.

Flowchart 1.


Riparian Management Zone (RMZ) Retention Results/Strategies
Streams S1A, S1B, S2, S3; Wetlands W1, W5
Streams S4, S5, S6
W3 Wetland L3 Lake
Lakes L1-A, L1-B, L2, L4, A, A-M, B, C, D, E
Mod/High WTH
Low WTH
Retain all trees in >/= 25% of RMZ area
Retain all trees in >/=0% of RMZ area
Follow paragraph 1 under FSP section 5.1.2.3
Flowing directly into S1, S2, S3 stream
Not flowing directly into S1, S2, or S3 stream
Trees contribute significantly to S4, S5, S6 streambank or channel stability
Trees do not contribute significantly to S4, S5, S6 streambank or channel stability
High WTH
Mod/Low WTH
Windthrow Hazard (WTH): an evaluation based on soil depth, drainage, stand structure, species composition, and local knowledge.
Retain all trees in >/=0% of RMZ area
Retain enough trees adjacent to S4, S5, S6 stream to maintain streambank or channel stability
High WTH S4 Streams
Retain all trees in >/= 0% of RMZ area
Mod/Low WTH S4 Streams
Follow paragraph 2 under FSP section 5.1.2.3
Low/Mod/High WTH
Retain all trees in >/=0% of RMZ area
Mod/High WTH
Low WTH
Retain all trees in >/= 25% of RMZ area
Retain all trees in >/=0% of RMZ area
RMZ area the area in m2 or hectares falling within the riparian management zone of the affected waterbody within the confines of the gross cutblock area.

5.1.2.4 Objectives Set by Government for Wildlife and Biodiversity – Landscape Level

Legal Reference: FPPR Section 9 and Section 12.4.

The result or strategy for this objective is the same as that set out in Section 5.1.1.1.

5.1.2.5 Objectives Set by Government for Wildlife and Biodiversity – Stand Level

Legal Reference: FPPR Section 9.1 and Section 12.5(1).

Result or Strategy

The following results or strategies apply to the holder of this FSP and to each agreement holder.

1. Ensure that the total area covered by wildlife tree retention areas relating to one or more cutblocks where harvesting is concluded between April 1st and March 31st of any calendar year, is a minimum of 7% of the total area of the cutblocks;
2. Ensure that at the conclusion of harvesting in a cutblock that is greater than 15 hectares in size, the total amount of wildlife tree retention areas that relate to the cutblock is a minimum of 3.5% of the area of the cutblock;
3. Ensure that for the purposes of (1) and (2) above, a wildlife tree retention area may relate to more than one cutblock if all of the cutblocks that relate to the wildlife tree retention area collectively meet the applicable requirements of this section; and
4. Section 67 of the FPPR.

Scale of Measurement: Cutblock and / or aggregate of cutblocks that relate to wildlife tree retention areas.

Map Reference N/A.

5.1.2.6 Objectives Set By Government for Cultural Heritage Resources

Legal Reference: FPPR Section 10(a) and (b).

For the purposes of this result or strategy, the following definitions apply:

"cultural heritage resource" refers only to those resources that are the focus of a traditional use by an aboriginal people that are of continuing importance to that people, and not regulated under the Heritage Conservation Act.

A "cultural heritage resource evaluation" is a process conducted by a qualified person and consisting of the following steps:

1. If the cultural heritage resource consists of only culturally modified trees (CMTs) then:
   a) the holder of this FSP will conduct a CMT survey; and
   b) the survey results and the TSM's CMT management recommendations will be provided to affected First Nations.
2. If the cultural heritage resource is in addition to CMTs, or other than CMTs then:
   a) record the location of the cultural heritage resource;
   b) evaluate the direct impact of the forest practice on the cultural heritage resource;
   c) prepare recommendations to mitigate the impact on, conserve or, if necessary, protect, the cultural heritage resource considering:

i) the relative value or importance of the cultural heritage resource to a traditional use by an aboriginal people;

ii) the relative abundance or scarcity of the cultural heritage resource;

iii) the historical extent of the traditional use of the cultural heritage resource; and

iv) the impact that conserving or protecting the cultural heritage resource has on the TSM's ability to sell timber or an Agreement Holder's timber harvesting rights; and

d) communicate the outcomes of this evaluation to the First Nation in whose asserted traditional territory the area lies.

Result or Strategy

The holder of this FSP will comply with the following results or strategies:

5.1.2.6.1 Communication of Development Plans

The holder of this FSP will make reasonable efforts to communicate development plans to affected First Nation Bands, thereby allowing them opportunity for input.

5.1.2.6.2 Evaluation For Cultural Heritage Resource Potential

Prior to harvest of a cutblock or construction of a road, a cultural heritage resource evaluation will be conducted within areas:

a) that contain previously identified cultural heritage resources, if the area has not been previously evaluated;

b) that are identified as having "high potential" within the established Prince George Forest District archaeological impact assessment predictive model for the area; or

c) where site-specific information regarding cultural heritage resources is brought forward or made available to the holder of this FSP by First Nations, or a government employee.

5.1.2.6.3 Unidentified Features Encountered During Development Activities

If a previously unidentified cultural heritage resource is encountered by the TSM or Agreement Holder while conducting a forest practice, operations will be modified or cease to the extent necessary to protect the resource, until a cultural heritage resource evaluation can be carried out.

5.1.2.6.4 Forest Practice Activities Consistent with Recommendations from Evaluations

Forest practice activities will be consistent with the recommendations given in a cultural heritage resource evaluation conducted under 5.1.2.6.2 or 5.1.2.6.3.

Scale of Measurement: FDU.
Map Reference: N/A.

5.1.3 Other Established Objectives

Legal Reference: FRPA Section 181.

The following results and strategies apply to other established objectives that pertain to all or part of the FDU under this FSP. These objectives relate to areas listed in section 180 of FRPA.

5.1.3.1 Recreation Resources

Legal Reference: FRPA Section 181, Forest Practices Code pre January 31, 2004 version Section 6.

Result or Strategy

The following results or strategies apply to the holder of this FSP and to each agreement holder.

1. Harvesting or road construction adjacent to a recreation site or trail with established objectives will be conducted in accordance with the established objectives.
2. Where harvest or road construction is to occur within 100 m of a recreation site or recreation trail without established objectives and is identified on the FSP maps, one of the following results or strategies will be applied:
   a) A silviculture system of partial cutting, when stand damage from forest health factors is between 10% and 40% of the stems per hectare;
   b) A silviculture system of clear cutting, when stand damage from forest health factors is greater than 40% of the stems per hectare; or
   c) Temporary access construction, or permanent access construction with access control implemented post-construction.
3. Physical damage to the recreation site or trail due to road construction or harvest activities by the holder of this FSP or Agreement Holder within the 100 metre buffer, will be repaired or mitigated.

Where the holder of this FSP administers a Forest Service road on the only access route to a recreation site identified on the FSP maps, summer access will not be restricted as a result of road maintenance and deactivation activities, except for temporary closures to repair or replace roads and bridges. Table 2 lists the applicable Forest Service roads for clarity.

Table 2. BCTS Maintained Access Roads to Recreation Sites.

General Location	Recreation Feature	Forest Service Road	Road Type/Status
Meadow Lake	Meadow Lake Recreation Site	Pelican-Meadow	Permanent All-weather

Scale of Measurement: FDU.

Map Reference: All identified recreation sites and recreation trails can be found on the FSP Content Maps.

5.1.3.2 Caribou and Mule Deer Ungulate Winter Range

Legal Reference: FRPA Section 181, Forest Practices Code pre January 31, 2004 version Operational and Site Planning Regulation Section 69(1).

Result or Strategy

The following results or strategies apply to the holder of this FSP and to each agreement holder.

5.1.3.2.1 Mountain Caribou Ungulate Winter Range

The results and strategies for "Mountain Caribou Ungulate Winter Range" are the requirements specified in the order U-7-003.

Scale of Measurement: Mountain Caribou UWR corridors, high and medium habitat units within the FDU.

Map Reference: Mountain Caribou UWR corridors, high and medium habitat units are found on the FSP content maps.

5.1.3.2.2 Mule Deer Ungulate Winter Range

The results and strategies for "Mule Deer Ungulate Winter Range" are the requirements specified in the order U-7-013.

Scale of Measurement: Mule Deer UWR habitat units within the FDU.

Map Reference: Mule Deer UWR habitat units are found on the FSP content maps.

5.1.3.3 Lakeshore Management Zones

Legal Reference: Forest Practices Code pre January 31, 2004 version Operational and Site Planning Regulation Section 64(1).

For the purposes of this result or strategy, the following background information is provided:

1. In 1995, most L1 lakes in the Prince George Forest district were classified (A to E) following procedures in the Lake Classification and Lakeshore Management Guidebook. These classifications, along with riparian reserve and management zone widths, were made known by the District Manager on December 22, 1995.
2. L1 lakes shown on the FSP Content maps have Lakeshore classes as listed in Table 3 if they were made known. Riparian zone widths listed in Table 3 will be applied to the lakes with lakeshore classification, that are within or adjacent to the FDU of this FSP.

Table 3. Lake Riparian Management Zone Widths By Lakeshore Class.

Lakeshore Class	Riparian Reserve Zone (RRZ)	Riparian Management Zone (RMZ)	Riparian Management Area (RMA)
A	200 m	50 m	250 m
B	50 m	50 m	100 m
C	30 m	70 m	100 m
D	10 m	90 m	100 m
E	10 m	40 m	50 m

Result or Strategy

No formal Lakeshore Management Zone objectives were established for any of these classified lakes, therefore no result or strategy is required in this FSP.

Scale of Measurement: N/A.

Map Reference: All lakeshore classified lakes are shown on the FSP Content Maps with their classification.

5.1.3.4 Visual Quality Objectives

Legal Reference: FRPA section 181, GAR section 17, Forest Practices Code Operational and Site Planning Regulation Section 36.1 and 37.

Result or Strategy

The results and strategies that apply to the holder of this FSP and to each Agreement Holder will be the Established Visual Quality Objectives (EVQO) or Recommended Visual Quality Classes (RVQC) of the known scenic areas.

Scale of Measurement: Known scenic area polygons.

Map Reference: All known scenic areas and their associated visual quality objectives/ visual quality classes are shown on the FSP Content Maps

6 MEASURES

All measures are applicable across the entire FDU.

6.1 Measures for Preventing the Introduction or Spread of Invasive Plants

Legal Reference: FPPR Section 17.

The following measures will be taken by the TSM to prevent the introduction or spread of invasive plants if such introduction or spread is likely to be the result of forest practices carried out under this FSP by the TSM or an Agreement Holder:

1. On an annual basis, on areas within the FDU, the area of known sites of invasive plants, and sites considered as high or extremely high risk to invasive plant establishment through forest practices, will be identified using information gathered from forest district range staff, regional experts, or other agencies.
2. Within sites in subparagraph (1), contiguous areas of exposed mineral soil greater than 0.25 ha in areas of extremely high risk or greater than 0.5 ha in areas of high risk disturbed through a forest practice activity that are not to be reforested, will be seeded with grass and legumes within one year of disturbance, with the exclusion of the road surface of active roads.
3. Sites referred to in subparagraph (2) will be monitored over the year following seeding to ensure they are revegetated. Sites not revegetated will be re-seeded and further monitored.
4. The seed used for the purposes of subparagraph (2) will meet or exceed Canada Common Number 1 specifications as defined by the Canada Seeds Act.

Scale of Measurement: Known locations, high risk sites or extremely high risk sites.
Map Reference: N/A.

6.2 Measures to Mitigate the Loss of Natural Range Barriers

Legal Reference: FPPR Section 18.

The following measures will be taken by the TSM in all FDU areas that contain or are adjacent to range tenures, to mitigate the effect of removing or rendering ineffective natural range barriers that are being relied upon pursuant to range tenures inside or immediately adjacent to the FDU:

1. Each year under the term of this FSP, the areas within FDUs that are occupied by or adjacent to range tenures will be updated from information gathered from district range staff, or regional experts.
2. The range tenure holder will be informed of planned harvest and road construction within or adjacent to their range tenure.
3. Where the range tenure holder indicates that the planned harvest and road construction will remove or render ineffective a natural range barrier, the holder of this FSP will mitigate these effects.

Scale of Measurement: Cutblock or road.
Map Reference: Existing range tenure areas are shown on the FSP Content Maps.

7 STOCKING REQUIREMENTS

All stocking requirements are applicable across the entire FDU.

Legal Reference: FPPR Section 16, and 44(1); and FRPA Section 29(2).

Scale of Measurement: Cutblock.
Map Reference: N/A.

7.1 General Standards

Where the TSM is required under FRPA to establish a free growing stand with respect to timber harvesting governed by this FSP, the TSM will, subject to Section 7.2, do so in accordance with the coniferous, deciduous and multi-layer stocking standards in Appendix A.

Section 44(1) of the FPPR (free growing stands generally) applies to all areas of this FSP.

7.1.1 Coniferous Stocking Standards

The coniferous stocking standards in Table A-1 apply to all blocks being managed as single layer coniferous stands. The minimum inter-tree distance is 2 metres, but can be reduced to 1.6 metres or 1.0 metre, as shown in Table A-1, depending on site specific conditions. For the purposes of the coniferous stocking standards in this FSP, the "Healthy Tree Definition for FSP Stocking Standards" in Appendix A will be used to define a healthy tree during a free growing assessment. The "Free Growing Acceptability Guidelines for Advance Regeneration and Residual Mature and Pole Layer Crop Trees" in Appendix A will be used to define acceptable advance regeneration, residual mature and crop trees in a free growing assessment.

7.1.2 Deciduous Stocking Standards

The deciduous stocking standards in Table A-2 apply to all blocks being managed as even-aged, leading or pure birch or aspen stands. The minimum inter-tree distance is 2 metres, but can be reduced to 1.6 metres or 1.0 metre, as shown in Table A-2, depending on site specific conditions. As per the definition of a free growing stand, birch and aspen are considered commercially valuable species on areas using the deciduous stocking standards.

7.1.3 Multi-Layer Stocking Standards

The multi-layer stocking standards in Table A-3 apply to all blocks being managed as multi-layer coniferous stands. The preferred and acceptable species to be retained are noted in the coniferous stocking standards in Table A-1. The minimum leave tree characteristics including form, health and vigour must meet the requirements for "Free Growing Acceptability Guidelines for Advance Regeneration and Residual Mature and Pole Layer Crop Trees" in Appendix A.

7.2 Variations from General Standards

Despite Section 7.1, the TSM may apply the following stocking standards in the following circumstances:

7.2.1 Dunkley Lumber Ltd.'s Stocking Standards

Site plans developed for blocks listed in Table 4 (blocks within TFL 53) will reference the stocking standards in the approved FDP or future FSPs for Dunkley Lumber Ltd., rather than the stocking standards in Appendix A.

Table 4. FRPA 196(1) and 196(2) Blocks in TFL 53.

TSL Number	TSL Number	TSL Number	TSL Number
A63051	A70706-A-1	A78898-1	A70710-A-1
A63061	A70708-A-1	A78899-1	A72821
A63077	A70709-A-1	A78900-1	A72850

7.2.2 Regeneration Date and Free Growing Date for Coniferous Stocking Standards

The regeneration date of 4 years may be extended to 7 years where natural ingress is used to achieve regeneration.

Despite the early free growing date stated in the coniferous stocking standards, the actual early free growing date for a block with a site plan referencing these standards will be the actual regeneration date plus five years for the ICH and SBS zones, and the actual regeneration date plus eight years for the ESSF zone.

7.2.3 Free Growing Date for Deciduous Stocking Standards

Despite the early free growing date stated in the deciduous stocking standards tables, the actual early free growing date for a block with a site plan referencing these standards will be the actual regeneration date plus five years.

7.2.4 White Pine Weevil Area Considerations

In areas with high incidence of white pine weevil (Pissodes strobi) [East of Highway 97 below 800 meters] aspen and birch will not be considered competition to a spruce crop tree as long as the height diameter ratio of the spruce crop tree (with an undamaged top) is less than 60 centimetres when conducting a free growing survey.

7.2.5 Riparian Management Considerations

Aspen, cottonwood, and birch as well as willow and alder within 5 metres of a temperature sensitive stream, or a fish bearing stream, are not considered brush competition when conducting a free growing survey.

7.2.6 Management of Mule Deer Ungulate Winter Range

Within all UWR units to which this FSP applies, douglas-fir is a preferred species for the purposes of the stocking standards, despite the species listed in the applicable stocking standards. In addition, a minimum of 25% of the net area to be reforested will contain douglas-fir at free growing.

SIGNATURES OF PREPARING FORESTER AND PERSON REQUIRED TO PREPARE PLAN

Preparing Forester

"I certify that the work described herein fulfills the standards expected of a member of the Association of British Columbia Forest Professionals and that I did personally supervise the work."

Steven R. Webb, R.P.F.
BCTS Planning Officer
Prince George Timber Sales Office
Prince George Business Area

Signature of Person Required to Prepare the Plan

Ian Hamann, P. Eng, R.P.F.
Timber Sales Manager
Prince George Timber Sales Office
Prince George Business Area

APPENDIX A

FSP CONIFEROUS STOCKING STANDARDS – SINGLE LAYER

and

DECIDUOUS STOCKING STANDARDS

and

FSP CONIFEROUS STOCKING STANDARDS – MULTI LAYER

and

HEALTHY TREE DEFINITION FOR FSP CONIFEROUS STOCKING STANDARDS

and

FREE GROWING ACCEPTABILITY GUIDELINES FOR ADVANCE REGENERATION AND RESIDUAL MATURE AND POLE LAYER CROP TREES

Table A-1. Coniferous Stocking Standards – Single Layer.

ID	BCTS NAME	BEC			PREFERRED SPECIES								ACCEPTABLE SPECIES						STOCKING (w/s)			MIN INTER TREE DIST	DELAY	FG DATE		TREE HT > BRUSH (min%)	MAXIMUM DENSITY		
		ZONE	SZ / VAR	SITE SERIES	1	HT (min)	2	HT (min)	3	HT (min)	4	HT (min)	1	HT (min)	2	HT (min)	3	HT (min)	TARGET P&A (sph)	MIN P&A (sph)	MIN P (sph)		MAX (yrs)	EARLY (yrs)	LATE (yrs)		MAX (sph)	POST SPACING MIN (sph)	POST SPACING MAX (sph)
29600	A1	ESSF	mm1	01/04/05/06	SX	0.8	BL	0.8					PLI	1.6					1200	700	600	1.6	4	12	20	125	10000	700	1800
29601	A2	ESSF	mm1	02	BL	0.6	PLI	1.2	SX	0.6									1000	500	400	1.6	4	12	20	125	10000	500	1600
29602	A3	ESSF	mm1	03	PLI	1.2	SX	0.6					BL	0.6					1000	500	400	1.6	4	12	20	125	10000	500	1600
29603	A4	ESSF	mm1	07	BL	0.6	SX	0.6					PLI	1.2					400	200	200	1	4	12	20	125	10000	200	1000
29604	B1	ESSF	mv1	01	BL	0.8	SX	0.8					PLI	1.6															
29605	B2	ESSF	mv1	02	PLI	1.2							BL	0.6					1200	700	600	1.6	4	12	20	125	10000	700	1800
29606	B3	ESSF	mv1	03	PLI	1.2	SX	0.6	BL	0.6									1000	500	400	1.6	4	12	20	125	10000	500	1600
29607	B4	ESSF	mv1	04/05	SX	0.6	BL	0.6					PLI	1.2					1000	500	400	1.6	4	12	20	125	10000	500	1600
29608	C1	ESSF	mv2	01/04/05	BL	0.8	SX	0.8											1000	500	400	1	4	12	20	125	10000	500	1600
29609	C2	ESSF	mv2	02	PLI	1.6	BL	0.8	SX	0.8			PLI	1.6															
29610	C3	ESSF	mv2	03	PLI	1.2	SX	0.6	BL	0.6									1200	700	600	1.6	4	12	20	125	10000	700	1600
29611	C4	ESSF	mv2	06	BL	0.6	SX	0.6					SB	0.6					1200	700	600	1.6	4	12	20	125	10000	700	1600
													PLI	1.2					1000	500	400	1.6	4	12	20	125	10000	500	1600
29612	D1	ESSF	mv3	01/04/05/06	SX	0.8	BL	0.8											400	200	200	1	4	12	20	125	10000	200	1000
29613	D2	ESSF	mv3	02	PLI	1.2	SX	0.6					PLI	1.6															
29614	D3	ESSF	mv3	03/07	SX	0.6	BL	0.6					BL	0.6					1200	700	600	1.6	4	12	20	125	10000	700	1800
													PLI	1.2					1000	500	400	1	4	12	20	125	10000	500	1600
29615	E1	ESSF	wc3	01	SX	0.8	BL	0.8											1000	500	400	1.6	4	12	20	125	10000	500	1600
29616	E2	ESSF	wc3	02	SX	0.6	BL	0.6					PLI	1.6															
29617	E3	ESSF	wc3	03	BL	0.6	SX	0.6					PLI	1.2					1200	700	600	1.6	4	12	20	125	10000	700	1800
																			1000	500	400	1	4	12	20	125	10000	500	1600
29618	F1	ESSF	wk1	01/03/04/05	SX	0.8	BL	0.8											400	200	200	1	4	12	20	125	10000	200	1000
29619	F2	ESSF	wk1	02	SX	0.6	BL	0.6					PLI	1.6															
29620	F3	ESSF	wk1	06/07	SX	0.6	BL	0.6					PLI	1.2					1200	700	600	1.6	4	12	20	125	10000	700	1800
																			1000	500	400	1	4	12	20	125	10000	500	1600
29621	G1	ESSF	wk2	01/02/04/05	SX	0.8	BL	0.8											1000	500	400	1	4	12	20	125	10000	500	1600
29622	G2	ESSF	wk2	03	SX	0.8	BL	0.8					PLI	1.6															
29623	G3	ESSF	wk2	06	SX	0.6	BL	0.6											1200	700	600	1.6	4	12	20	125	10000	700	1800
																			1000	500	400	1	4	12	20	125	10000	500	1600
29624	H1	ICH	vk2	01/04	FDI	1.4	SX	1	CW	1			PLI	2	BL	1													
29625	H2	ICH	vk2	02	FDI	0.8	HW	0.8					PLI	1.4	SX	0.8	CW	0.8	1200	700	600	1.6	4	9	15	150	10000	700	1800
																			1000	500	400	1	4	9	15	150	10000	500	1600

Table A-1 (cont'd). Coniferous Stocking Standards – Single Layer.

ID	BCTS NAME	BEC			PREFERRED SPECIES								ACCEPTABLE SPECIES						STOCKING (w/s)			MIN INTER TREE DIST	DELAY	FG DATE		TREE HT > BRUSH (min%)	MAXIMUM DENSITY		
		ZONE	SZ / VAR	SITE SERIES	1	HT (min)	2	HT (min)	3	HT (min)	4	HT (min)	1	HT (min)	2	HT (min)	3	HT (min)	TARGET P&A (sph)	MIN P&A (sph)	MIN P (sph)		MAX (yrs)	EARLY (yrs)	LATE (yrs)		MAX (sph)	POST SPACING MIN (sph)	POST SPACING MAX (sph)
29626	H3	ICH	vk2	03	FDI	1.4							PLI	2	CW	1	SX	1	1200	700	600	1.6	4	9	15	150	10000	700	1800
29627	H4	ICH	vk2	05	SX	1	BL	1	CW	1			PLI	2					1200	700	600	1.6	4	9	15	150	10000	700	1800
29628	H5	ICH	vk2	06	SX	0.8	BL	0.8	CW	0.8			PLI	1.4					1000	500	400	1	4	9	15	150	10000	500	1600
29629	H6	ICH	vk2	07	PLI	1.4							SX	0.8	SB	0.8			400	200	200	1	4	9	15	150	10000	200	1000
29630	J1	ICH	wk3	01/05	FDI	1.4	CW	1	SX	1			PLI	2	BL	1			1200	700	600	1.6	4	9	15	150	10000	700	1800
29631	J2	ICH	wk3	03/04	FDI	1.4	SX	1					PLI	2	CW	1			1200	700	600	1.6	4	9	15	150	10000	700	1800
29632	J3	ICH	wk3	02	PLI	1.4							HW	0.8	SX	0.8			1000	500	400	1	4	9	15	150	10000	500	1600
29633	J4	ICH	wk3	06	SX	0.8	CW	0.8					PLI	1.4	BL	0.8			1000	500	400	1	4	9	15	150	10000	500	1600
29634	J5	ICH	wk3	07	SX	0.8							PLI	1.4	CW	0.8	HW	0.8	1000	500	400	1	4	9	15	150	10000	500	1600
29635	J6	ICH	wk3	08	SX	0.8	CW	0.8					BL	0.8	HW	0.8			1000	500	400	1	4	9	15	150	10000	500	1600
29636	J7	ICH	wk3	09	PLI	1.4							BL	0.8					400	200	200	1	4	9	15	150	10000	200	1000
29637	K1	SBS	dw1	01/04/05	PLI	2	FDI	1.4	SX	1									1200	700	600	1.6	4	9	15	150	10000	700	1800
29638	K2	SBS	dw1	06/07/08	PLI	2	FDI	1.4	SX	1			BL	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29639	K3	SBS	dw1	02	PLI	1.4	FDI	1											1000	500	400	1	4	9	15	150	10000	500	1600
29640	K4	SBS	dw1	03	PLI	2	FDI	1.4											1200	700	600	1.6	4	9	15	150	10000	700	1800
29641	K5	SBS	dw1	09	PLI	1.4	SX	0.8					BL	0.8					1000	500	400	1	4	9	15	150	10000	500	1600
29642	L1	SBS	dw2	01/05/06	PLI	2	FDI	1.4	SX	1									1200	700	600	1.6	4	9	15	150	10000	700	1800
29643	L2	SBS	dw2	03/04	PLI	2	FDI	1.4											1200	700	600	1.6	4	9	15	150	10000	700	1800
29644	L3	SBS	dw2	08/09	PLI	2	SX	1					FDI	1.4	BL	1			1200	700	600	1.6	4	9	15	150	10000	700	1800
29645	L4	SBS	dw2	02	PLI	1.4	FDI	1											1000	500	400	1	4	9	15	150	10000	500	1600
29646	L5	SBS	dw2	07	PLI	2							SX	1	SB	1			1200	700	600	1.6	4	9	15	150	10000	700	1800
29647	L6	SBS	dw2	10	PLI	1.4	SX	0.8					BL	0.8					1000	500	400	1	4	9	15	150	10000	500	1600
29648	L7	SBS	dw2	11	PLI	1.4	SX	0.8					SB	0.8					400	200	200	1	4	9	15	150	10000	200	1000
29649	M1	SBS	dw3	01	PLI	2	FDI	1.4	SX	1									1200	700	600	1.6	4	9	15	150	10000	700	1800
29650	M2	SBS	dw3	02	PLI	1.4	FDI	1					SX	1					1000	500	400	1.6	4	9	15	150	10000	500	1600
29651	M3	SBS	dw3	03/05	PLI	2							SX	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29652	M4	SBS	dw3	04	PLI	2	FDI	1.4					SX	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29653	M5	SBS	dw3	06/08	PLI	2	SX	1	FDI	1.4			BL	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29654	M6	SBS	dw3	07	PLI	2	SX	1					BL	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29655	M7	SBS	dw3	09	PLI	1.4	SX	0.8					BL	0.8					1000	500	400	1	4	9	15	150	10000	500	1600
29656	M8	SBS	dw3	10	PLI	1.4	SX	0.8	SB	0.8	LT	0.8							400	200	200	1	4	9	15	150	10000	200	1000

Table A-1. Coniferous Stocking Standards – Single Layer.

ID	BCTS NAME	BEC			PREFERRED SPECIES								ACCEPTABLE SPECIES						STOCKING (w/s)			MIN INTER TREE DIST	DELAY	FG DATE		TREE HT > BRUSH (min%)	MAXIMUM DENSITY	
		ZONE	SZ / VAR	SITE SERIES	1	HT (min)	2	HT (min)	3	HT (min)	4	HT (min)	1	HT (min)	2	HT (min)	3	HT (min)	TARGET P&A (sph)	MIN P&A (sph)	MIN P (sph)		MAX (yrs)	EARLY (yrs)	LATE (yrs)		MAX (sph)	POST SPACING MIN (sph)	POST SPACING MAX (sph)
29600	A1	ESSF	mm1	01/04/05/06	Sx	0.8	Bl	0.8					Pli	1.6					1200	700	600	1.6	4	12	20	125	10000	700	1800
29601	A2	ESSF	mm1	02	Bl	0.6	Pli	1.2	Sx	0.6									1000	500	400	1.6	4	12	20	125	10000	500	1600
29602	A3	ESSF	mm1	03	Pli	1.2	Sx	0.6					Bl	0.6					1000	500	400	1.6	4	12	20	125	10000	500	1600
29603	A4	ESSF	mm1	07	Bl	0.6	Sx	0.6					Pli	1.2					400	200	200	1	4	12	20	125	10000	200	1000
29604	B1	ESSF	mv1	01	Bl	0.8	Sx	0.8					Pli	1.6					1200	700	600	1.6	4	12	20	125	10000	700	1800
29605	B2	ESSF	mv1	02	Pli	1.2							Bl	0.6					1000	500	400	1.6	4	12	20	125	10000	500	1600
29606	B3	ESSF	mv1	03	Pli	1.2	Sx	0.6	Bl	0.6									1000	500	400	1.6	4	12	20	125	10000	500	1600
29607	B4	ESSF	mv1	04/05	Sx	0.6	Bl	0.6					Pli	1.2					1000	500	400	1	4	12	20	125	10000	500	1600
29608	C1	ESSF	mv2	01/04/05	Bl	0.8	Sx	0.8					Pli	1.6					1200	700	600	1.6	4	12	20	125	10000	700	1600
29609	C2	ESSF	mv2	02	Pli	1.6	Bl	0.8	Sx	0.8									1200	700	600	1.6	4	12	20	125	10000	700	1600
29610	C3	ESSF	mv2	03	Pli	1.2	Sx	0.6	Bl	0.6			Sb	0.6					1000	500	400	1.6	4	12	20	125	10000	500	1600
29611	C4	ESSF	mv2	06	Bl	0.6	Sx	0.6					Pli	1.2					400	200	200	1	4	12	20	125	10000	200	1000
29612	D1	ESSF	mv3	01/04/05/06	Sx	0.8	Bl	0.8					Pli	1.6					1200	700	600	1.6	4	12	20	125	10000	700	1800
29613	D2	ESSF	mv3	02	Pli	1.2	Sx	0.6					Bl	0.6					1000	500	400	1	4	12	20	125	10000	500	1600
29614	D3	ESSF	mv3	03/07	Sx	0.6	Bl	0.6					Pli	1.2					1000	500	400	1.6	4	12	20	125	10000	500	1600
29615	E1	ESSF	wc3	01	Sx	0.8	Bl	0.8					Pli	1.6					1200	700	600	1.6	4	12	20	125	10000	700	1800
29616	E2	ESSF	wc3	02	Sx	0.6	Bl	0.6					Pli	1.2					1000	500	400	1	4	12	20	125	10000	500	1600
29617	E3	ESSF	wc3	03	Bl	0.6	Sx	0.6											400	200	200	1	4	12	20	125	10000	200	1000
29618	F1	ESSF	wk1	01/03/04/05	Sx	0.8	Bl	0.8					Pli	1.6					1200	700	600	1.6	4	12	20	125	10000	700	1800
29619	F2	ESSF	wk1	02	Sx	0.6	Bl	0.6					Pli	1.2					1000	500	400	1	4	12	20	125	10000	500	1600
29620	F3	ESSF	wk1	06/07	Sx	0.6	Bl	0.6											1000	500	400	1	4	12	20	125	10000	500	1600
29621	G1	ESSF	wk2	01/02/04/05	Sx	0.8	Bl	0.8											1200	700	600	1.6	4	12	20	125	10000	700	1800
29622	G2	ESSF	wk2	03	Sx	0.8	Bl	0.8					Pli	1.6					1200	700	600	1.6	4	12	20	125	10000	700	1800
29623	G3	ESSF	wk2	06	Sx	0.6	Bl	0.6											1000	500	400	1	4	12	20	125	10000	500	1600
29624	H1	ICH	vk2	01/04	Fdi	1.4	Sx	1	Cw	1			Pli	2	Bl	1			1200	700	600	1.6	4	9	15	150	10000	700	1800
29625	H2	ICH	vk2	02	Fdi	0.8	Hw	0.8					Pli	1.4	Sx	0.8	Cw	0.8	1000	500	400	1	4	9	15	150	10000	500	1600

Table A-1 (cont'd). Coniferous Stocking Standards – Single Layer

ID	BCTS NAME	BEC			PREFERRED SPECIES								ACCEPTABLE SPECIES						STOCKING (w/s)			MIN INTER TREE DIST	DELAY	FG DATE		TREE HT > BRUSH (min%)	MAXIMUM DENSITY		
		ZONE	SZ / VAR	SITE SERIES	1	HT (min)	2	HT (min)	3	HT (min)	4	HT (min)	1	HT (min)	2	HT (min)	3	HT (min)	TARGET P&A (sph)	MIN P&A (sph)	MIN P (sph)		MAX (yrs)	EARLY (yrs)	LATE (yrs)		MAX (sph)	POST SPACING MIN (sph)	POST SPACING MAX (sph)
29626	H3	ICH	vk2	03	FDI	1.4							PLI	2	CW	1	SX	1	1200	700	600	1.6	4	9	15	150	10000	700	1800
29627	H4	ICH	vk2	05	SX	1	BL	1	CW	1			PLI	2					1200	700	600	1.6	4	9	15	150	10000	700	1800
29628	H5	ICH	vk2	06	SX	0.8	BL	0.8	CW	0.8			PLI	1.4					1000	500	400	1	4	9	15	150	10000	500	1600
29629	H6	ICH	vk2	07	PLI	1.4							SX	0.8	SB	0.8			400	200	200	1	4	9	15	150	10000	200	1000
29630	J1	ICH	wk3	01/05	FDI	1.4	CW	1	SX	1			PLI	2	BL	1			1200	700	600	1.6	4	9	15	150	10000	700	1800
29631	J2	ICH	wk3	03/04	FDI	1.4	SX	1					PLI	2	CW	1			1200	700	600	1.6	4	9	15	150	10000	700	1800
29632	J3	ICH	wk3	02	PLI	1.4							HW	0.8	SX	0.8			1000	500	400	1	4	9	15	150	10000	500	1600
29633	J4	ICH	wk3	06	SX	0.8	CW	0.8					PLI	1.4	BL	0.8			1000	500	400	1	4	9	15	150	10000	500	1600
29634	J5	ICH	wk3	07	SX	0.8							PLI	1.4	CW	0.8	HW	0.8	1000	500	400	1	4	9	15	150	10000	500	1600
29635	J6	ICH	wk3	08	SX	0.8	CW	0.8					BL	0.8	HW	0.8			1000	500	400	1	4	9	15	150	10000	500	1600
29636	J7	ICH	wk3	09	PLI	1.4							BL	0.8					400	200	200	1	4	9	15	150	10000	200	1000
29637	K1	SBS	dw1	01/04/05	PLI	2	FDI	1.4	SX	1									1200	700	600	1.6	4	9	15	150	10000	700	1800
29638	K2	SBS	dw1	06/07/08	PLI	2	FDI	1.4	SX	1			BL	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29639	K3	SBS	dw1	02	PLI	1.4	FDI	1											1000	500	400	1	4	9	15	150	10000	500	1600
29640	K4	SBS	dw1	03	PLI	2	FDI	1.4											1200	700	600	1.6	4	9	15	150	10000	700	1800
29641	K5	SBS	dw1	09	PLI	1.4	SX	0.8					BL	0.8					1000	500	400	1	4	9	15	150	10000	500	1600
29642	L1	SBS	dw2	01/05/06	PLI	2	FDI	1.4	SX	1									1200	700	600	1.6	4	9	15	150	10000	700	1800
29643	L2	SBS	dw2	03/04	PLI	2	FDI	1.4											1200	700	600	1.6	4	9	15	150	10000	700	1800
29644	L3	SBS	dw2	08/09	PLI	2	SX	1					FDI	1.4	BL	1			1200	700	600	1.6	4	9	15	150	10000	700	1800
29645	L4	SBS	dw2	02	PLI	1.4	FDI	1											1000	500	400	1	4	9	15	150	10000	500	1600
29646	L5	SBS	dw2	07	PLI	2							SX	1	SB	1			1200	700	600	1.6	4	9	15	150	10000	700	1800
29647	L6	SBS	dw2	10	PLI	1.4	SX	0.8					BL	0.8					1000	500	400	1	4	9	15	150	10000	500	1600
29648	L7	SBS	dw2	11	PLI	1.4	SX	0.8					SB	0.8					400	200	200	1	4	9	15	150	10000	200	1000
29649	M1	SBS	dw3	01	PLI	2	FDI	1.4	SX	1									1200	700	600	1.6	4	9	15	150	10000	700	1800
29650	M2	SBS	dw3	02	PLI	1.4	FDI	1					SX	1					1000	500	400	1.6	4	9	15	150	10000	500	1600
29651	M3	SBS	dw3	03/05	PLI	2							SX	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29652	M4	SBS	dw3	04	PLI	2	FDI	1.4					SX	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29653	M5	SBS	dw3	06/08	PLI	2	SX	1	FDI	1.4			BL	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29654	M6	SBS	dw3	07	PLI	2	SX	1					BL	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29655	M7	SBS	dw3	09	PLI	1.4	SX	0.8					BL	0.8					1000	500	400	1	4	9	15	150	10000	500	1600
29656	M8	SBS	dw3	10	PLI	1.4	SX	0.8	SB	0.8	LT	0.8							400	200	200	1	4	9	15	150	10000	200	1000

Table A-1 (cont'd). Coniferous Stocking Standards – Single Layer.

ID	BCTS NAME	BEC			PREFERRED SPECIES								ACCEPTABLE SPECIES						STOCKING (w/s)			MIN INTER TREE DIST	DELAY	FG DATE		TREE HT > BRUSH (min%)	MAXIMUM DENSITY		
		ZONE	SZ / VAR	SITE SERIES	1	HT (min)	2	HT (min)	3	HT (min)	4	HT (min)	1	HT (min)	2	HT (min)	3	HT (min)	TARGET P&A (sph)	MIN P&A (sph)	MIN P (sph)		MAX (yrs)	EARLY (yrs)	LATE (yrs)		MAX (sph)	POST SPACING MIN (sph)	POST SPACING MAX (sph)
29657	N1	SBS	mc2	01/03/04/ 05/06/08/ 09	PLI	1.6	SX	0.8					BL	0.8					1200	700	600	1.6	4	9	15	150	10000	700	1800
29658	N2	SBS	mc2	02	PLI	1.2							BL	0.6	SX	0.6			1000	500	400	1	4	9	15	150	10000	500	1600
29659	N3	SBS	mc2	07	PLI	1.2	SX	0.6	SB	0.6									1000	500	400	1	4	9	15	150	10000	500	1600
29660	N4	SBS	mc2	10/11	PLI	1.2	SX	0.6					BL	0.6					1000	500	400	1	4	9	15	150	10000	500	1600
29661	N5	SBS	mc2	12	PLI	1.2	SX	0.6	SB	0.6									400	200	200	1	4	9	15	150	10000	200	1000
29662	O1	SBS	mc3	01/07	PLI	1.6	SX	0.8					BL	0.8					1200	700	600	1.6	4	9	15	150	10000	700	1800
29663	O2	SBS	mc3	02/03/05/ 06	PLI	1.6							SX	0.8					1200	700	600	1.6	4	9	15	150	10000	700	1800
29664	O3	SBS	mc3	04	PLI	1.6	SX	0.8					SB	0.8					1200	700	600	1.6	4	9	15	150	10000	700	1800
29665	O4	SBS	mc3	08	PLI	1.2	SX	0.6					BL	0.6					1000	500	400	1	4	9	15	150	10000	500	1600
29666	O5	SBS	mc3	09	PLI	1.2	SX	0.6	SB	0.6									400	200	200	1	4	9	15	150	10000	200	1000
29667	P1	SBS	mh	01/05/06	PLI	2	FDI	1.4	SX	1			BL	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29668	P2	SBS	mh	04/07/08	FDI	1.4	SX	1					BL	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29669	P3	SBS	mh	02	PLI	1.4	FDI	1											1000	500	400	1	4	9	15	150	10000	500	1600
29670	P4	SBS	mh	03	PLI	1.4	FDI	1	SX	0.8			BL	0.8					1000	500	400	1	4	9	15	150	10000	500	1600
29671	P5	SBS	mh	09	SX	0.8							BL	0.8					1000	500	400	1	4	9	15	150	10000	500	1600
29672	Q1	SBS	mk1	01/05/07	PLI	2	FDI	1.4	SX	1			BL	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29673	Q2	SBS	mk1	02/03/06	PLI	2							SX	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29674	Q3	SBS	mk1	04	PLI	2	FDI	1.4					SX	1	BL	1			1200	700	600	1.6	4	9	15	150	10000	700	1800
29675	Q4	SBS	mk1	08	PLI	2	SX	1					BL	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29676	Q5	SBS	mk1	09	PLI	1.4	SX	0.8					BL	0.8					1000	500	400	1	4	9	15	150	10000	500	1600
29677	Q6	SBS	mk1	10	PLI	1.4	SX	0.8	SB	0.8									400	200	200	1	4	9	15	150	10000	200	1000
29678	R1	SBS	mw	01/04/06	PLI	2	FDI	1.4	SX	1			BL	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29679	R2	SBS	mw	02	PLI	1.4	FDI	1					SX	0.8					1000	500	400	1	4	9	15	150	10000	500	1600
29680	R3	SBS	mw	03	PLI	2	FDI	1.4					SX	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29681	R4	SBS	mw	05/07	PLI	2	SX	1					BL	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29682	R5	SBS	mw	08	FDI	1.4	SX	1					BL	1	PLI	2			1200	700	600	1.6	4	9	15	150	10000	700	1800
29683	R6	SBS	mw	09	PLI	1.4	SX	0.8					BL	0.8					1000	500	400	1	4	9	15	150	10000	500	1600
29684	R7	SBS	mw	10	PLI	1.4	SX	0.8					SB	0.8					400	200	200	1	4	9	15	150	10000	200	1000

Table A-1 (cont'd). Coniferous Stocking Standards – Single Layer.

ID	BCTS NAME	BEC			PREFERRED SPECIES								ACCEPTABLE SPECIES						STOCKING (w/s)			MIN INTER TREE DIST	DELAY	FG DATE		TREE HT > BRUSH (min%)	MAXIMUM DENSITY	
																											POST SPACING	
		ZONE	SZ / VAR	SITE SERIES	1	HT (min)	2	HT (min)	3	HT (min)	4	HT (min)	1	HT (min)	2	HT (min)	3	HT (min)	TARGET P&A (sph)	MIN P&A (sph)	MIN P (sph)		MAX (yrs)	EARLY (yrs)	LATE (yrs)		MAX (sph)	MIN (sph)	MAX (sph)
29685	S1	SBS	vk	01/03/04	FDI	1.4	SX	1					PLI	2	BL	1			1200	700	600	1.6	4	9	15	150	10000	700	1800
29686	S2	SBS	vk	02	PLI	2							BL	1	SX	1			1200	700	600	1.6	4	9	15	150	10000	700	1800
29687	S3	SBS	vk	05/07	SX	1							BL	1	PLI	2			1200	700	600	1.6	4	9	15	150	10000	700	1800
29688	S4	SBS	vk	06	SX	0.8							BL	0.8	PLI	1.4			1000	500	400	1	4	9	15	150	10000	500	1600
29689	S5	SBS	vk	08	SX	0.8	SB	0.8					PLI	1.4					400	200	200	1	4	9	15	150	10000	200	1000
29690	S6	SBS	vk	09	PLI	1.4							BL	0.8	SX	0.8			1000	500	400	1	4	9	15	150	10000	500	1600
29691	S7	SBS	vk	10	BL	0.8	SX	0.8											1000	500	400	1	4	9	15	150	10000	500	1600
29692	T1	SBS	wk1	01/04/05	PLI	2	FDI	1.4	SX	1			BL	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29693	T2	SBS	wk1	06/07/08	PLI	2	SX	1					BL	1					1200	700	600	1.6	4	9	15	150	10000	700	1800
29694	T3	SBS	wk1	02	PLI	1.4	FDI	0.8					SX	0.8	BL	0.8			1000	500	400	1	4	9	15	150	10000	500	1600
29695	T4	SBS	wk1	03	PLI	2	FDI	1.4					SX	1	BL	1			1200	700	600	1.6	4	9	15	150	10000	700	1800
29696	T5	SBS	wk1	09/10	PLI	1.4	SX	0.8					BL	0.8					1000	500	400	1	4	9	15	150	10000	500	1600
29697	T6	SBS	wk1	11	PLI	1.4	SX	0.8	SB	0.8									400	200	200	1	4	9	15	150	10000	200	1000
29698	T7	SBS	wk1	12	PLI	2							SX	1	SB	1			1200	700	600	1.6	4	9	15	150	10000	700	1800

Table A-2. Deciduous Stocking Standards.

ID	BCTS NAME	BEC			PREFERRED SPECIES								ACCEPTABLE SPECIES						STOCKING (s/ha)			MIN INTER TREE DIST	DELAY	FG DATE		TREE HT > BRUSH (min%)	MAXIMUM DENSITY		
																											POST SPACING	
		ZONE	SZ / VAR	SITE SERIES	1	HT (min)	2	HT (min)	3	HT (min)	4	HT (min)	1	HT (min)	2	HT (min)	3	HT (min)	TARGET P&A (sph)	MIN P&A (sph)	MIN P (sph)		MAX (yrs)	EARLY (yrs)	LATE (yrs)		MAX (sph)	MIN (sph)	MAX (sph)
	DEC1	ICH	vk2	01/04/03	AT	2	EP	2					PLI	2	SX	1	CW	1	2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC2	ICH	vk2	05/06	AT	2	EP	2					SX	1	PLI	2	CW	1	2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC3	ICH	wk3	01/03/04/05	AT	2	EP	2					FDI	1.4	PLI	2	SX	1	2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC4	ICH	wk3	06/07	AT	2	EP	2					PLI	1.4	SX	0.8	CW	0.8	1200	1000	800	1	7	12	15	150	10000	1600	2600
	DEC5	SBS	dw1	01/04/05/06/07/08	AT	2	EP	2					FDI	1.4	PLI	2	SX	1	2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC6	SBS	dw1	02/03	AT	2	EP	2					FDI	1	PLI	1.4			1200	1000	800	1	7	12	15	150	10000	1600	2600
	DEC7	SBS	dw2	01/05/06/09	AT	2	EP	2					FDI	1.4	PLI	2	SX	1	2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC8	SBS	dw2	03/04	AT	2	EP	2					PLI	2	FDI	1.4			2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC9	SBS	dw2	07	AT	2	EP	2					PLI	2					2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC10	SBS	dw2	08	AT	2	EP	2					SX	1					2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC11	SBS	dw3	01/04/06/08	AT	2	EP	2					PLI	2	FDI	1.4	SX	1	2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC12	SBS	dw3	03/05	AT	2	EP	2					PLI	2					2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC13	SBS	dw3	07	AT	2	EP	2					SX	1					2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC14	SBS	mh	01/05/06	AT	2	EP	2					PLI	2	FDI	1.4	SX	1	2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC15	SBS	mh	04/07/08	AT	2	EP	2					FDI	1.4	SX	1			2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC16	SBS	mh	03	AT	2	EP	2					PLI	1.4	FDI	1	SX	0.8	1200	1000	800	1	7	12	15	150	10000	1600	2600
	DEC17	SBS	mk1	01/05/07/04	AT	2	EP	2					PLI	2	FDI	1.4	SX	1	2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC18	SBS	mk1	02/03/06/08	AT	2	EP	2					PLI	2	SX	1			2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC19	SBS	mw	01/03/04/06/08	AT	2	EP	2					PLI	2	FDI	1.4	SX	1	2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC20	SBS	mw	02	AT	2	EP	2					SX	0.8	PLI	1.4	FDI	1	1200	1000	800	1	7	12	15	150	10000	1600	2600
	DEC21	SBS	mw	05/07	AT	2	EP	2					PLI	2	SX	1			2000	1200	1000	1.6	7	12	15	150	10000	1600	2600

Table A-2 (cont'd). Deciduous Stocking Standards.

ID	BCTS NAME	BEC			PREFERRED SPECIES								ACCEPTABLE SPECIES						STOCKING (w/s)			MIN INTER TREE DIST	DELAY	FG DATE		TREE HT > BRUSH (min%)	MAXIMUM DENSITY		
		ZONE	SZ / VAR	SITE SERIES	1	HT (min)	2	HT (min)	3	HT (min)	4	HT (min)	1	HT (min)	2	HT (min)	3	HT (min)	TARGET P&A (sph)	MIN P&A (sph)	MIN P (sph)		MAX (yrs)	EARLY (yrs)	LATE (yrs)		MAX (sph)	POST SPACING MIN (sph)	POST SPACING MAX (sph)
	DEC22	SBS	vk	01/03/04	AT	2	EP	2					PLI	2	FDI	1.4	SX	1	2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC23	SBS	vk	02/05/07	AT	2	EP	2					PLI	2	SX	1			2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC24	SBS	vk	06/09	AT	2	EP	2					SX	0.8	PLI	1.4			1200	1000	800	1	7	12	15	150	10000	1600	2600
	DEC25	SBS	wk1	01/03/04/ 05/06/07/ 08	AT	2	EP	2					PLI	2	FDI	1.4	SX	1	2000	1200	1000	1.6	7	12	15	150	10000	1600	2600
	DEC26	SBS	wk1	09/10	AT	2	EP	2					PLI	1.4	SX	0.8			1200	1000	800	1	7	12	15	150	10000	1600	2600

Table A-3. Coniferous Stocking Standards – Multi Layer

Target from Table A standards (stems/ha)	Layer**	Target pa (well-spaced/ha)	MIN pa (well-spaced/ha)	MIN p (well-spaced/ha)	Target from Table A standards (stems/ha)	Layer**	Target pa (well-spaced/ha)	MIN pa (well-spaced/ha)	MIN p (well-spaced/ha)
1200	1	600	300	250	**800**	1	300	150	150
	2	800	400	300		2	400	200	200
	3	1000	500	400		3	600	300	300
	4	1200	700	600		4	800	400	400
1000	1	400	200	200	**600**	1	300	150	150
	2	600	300	250		2	400	200	200
	3	800	400	300		3	500	300	300
	4	1000	500	400		4	600	400	400
900	1	400	200	200	**400**	1	200	100	100
	2	500	300	250		2	300	125	125
	3	700	400	300		3	300	150	150
	4	900	500	400		4	400	200	200

* Maximum regeneration delay is seven years. For a seven-year regeneration delay, the early free growing is 12 years and the late free growing is 15 years. Regeneration delay can be met immediately following harvest if the residual stand has no significant damage or pest problems and meets minimum stocking standards. If regeneration is achieved immediately following harvest, earliest free growing date is 12 months after completion of harvest and the latest date is 24 months after completion of harvest.

***Stand Layer Definition*

Layer 1	Mature	trees >= 12.5 cm dbh
Layer 2	Pole	trees 7.5 cm to 12.4 cm dbh
Layer 3	Sapling	trees >= 1.3 m height to 7.4 cm dbh
Layer 4	Regeneration	trees < 1.3 m height

*** pa - preferred and acceptable species p - preferred species MIN - minimum

Preferred and acceptable species and "Target from Table A standards" are as specified in Table A-1 by biogeoclimatic ecosystem classification (BEC) site series.

Table A-3. Coniferous Stocking Standards – Multi Layer.

Target from Table A standards (stems/ha)	Layer**	Stocking*** Target pa (well-spaced/ha)	MIN pa	MIN p	Target from Table A standards (stems/ha)	Layer**	Stocking*** Target pa (well-spaced/ha)	MIN pa	MIN p
1200	1	600	300	250	**800**	1	300	150	150
	2	800	400	300		2	400	200	200
	3	1000	500	400		3	600	300	300
	4	1200	700	600		4	800	400	400
1000	1	400	200	200	**600**	1	300	150	150
	2	600	300	250		2	400	200	200
	3	800	400	300		3	500	300	300
	4	1000	500	400		4	600	400	400
900	1	400	200	200	**400**	1	200	100	100
	2	500	300	250		2	300	125	125
	3	700	400	300		3	300	150	150
	4	900	500	400		4	400	200	200

* Maximum regeneration delay is seven years. For a seven-year regeneration delay, the early free growing is 12 years and the late free growing is 15 years. Regeneration delay can be met immediately following harvest if the residual stand has no significant damage or pest problems and meets minimum stocking standards. If regeneration is achieved immediately following harvest, earliest free growing date is 12 months after completion of harvest and the latest date is 24 months after completion of harvest.

***Stand Layer Definition*

Layer 1	Mature	trees >= 12.5 cm dbh
Layer 2	Pole	trees 7.5 cm to 12.4 cm dbh
Layer 3	Sapling	trees >= 1.3 m height to 7.4 cm dbh
Layer 4	Regeneration	trees < 1.3 m height

*** pa - preferred and acceptable species p - preferred species MIN - minimum

Preferred and acceptable species and "Target from Table A standards" are as specified in Table A-1 by biogeoclimatic ecosystem classification (BEC) site series.

HEALTHY TREE DEFINITION FOR FSP CONIFEROUS STOCKING STANDARDS

FREE GROWING DAMAGE CRITERIA FOR THE PRINCE GEORGE FOREST DISTRICT

There are two key points to keep in mind when using these criteria:

1. These criteria apply only at the time the free growing survey is conducted and are specific to even-aged, age class 1 (single layer) stands that are being regenerated primarily to coniferous species for the production of timber. The assumptions made on the impact of pest damage to potential crop trees are founded on these factors.

2. Broadleaf species are noted in these criteria (usually as non-susceptible host species) but there are no damage criteria listed for these species. This is because the characteristics of most broadleaf species (e.g., pests and growth habits) are sufficiently different from those of conifers that creating a single table would be difficult and confusing. It is envisioned that broadleaf species, and multi layer stands will be covered by separate tables in the future.

These criteria are based on best available data and professional opinion, and are expected to be revised in the future with newly available knowledge or information.

Table A-4. Free Growing Damage Criteria for Coniferous Trees in Single Layer Stands.

PLEASE READ the preceding introduction before using the following table and figures.

Location of Damage	Type of Damage	Tree being assessed is UNACCEPTABLE if:	Host species	Likely damage agents & damage agent codes	Comments
Leader	Mortality	• The stem has grown less than 40 cm, or has had a serious defect, over the previous three years.	All	**frost** (NG), and all others	**Note:** the 40 cm stem growth is measured from the base of the dead leader downward **Note:** "serious defect" involves mortality of part or all of a previous leader (purpose of criterion is to assess tree vigour and its ability to recover). See Figure A-1
Stem	Wound (including sun scald and girdling)	• The tree has any wound which is greater than 33% of the stem circumference, or • the tree has a wound which is greater than 20% of the total length of the stem, or • the tree has a wound centered on an infection caused by a stem rust, canker, or dwarf mistletoe (See Note under Stem: Infection).	All	squirrel AS, beaver AZ, vole AV, porcupine AP, hare AH, Warrens root collar weevil IWW, sequoia pitch moth ISQ, fire NB, windthrow NW, sunscald NZ, logging TL, mechanical TM.	A **wound** is defined as an injury in which the cambium is dead (e.g., sunscald) or completely removed from the tree exposing the sapwood. Measure the wound across the widest point of the exposed sapwood (or dead cambium when the tree is damaged by sunscald). Healed over wounds (=scars) are acceptable.
Stem	Insect mining at root collar	• The tree is currently attacked by a bark-mining insect such as a weevil or a beetle and exhibits symptoms such as foliage discoloration, thinning and/or reduced height growth increments.	Pl, Sx	Root collar weevil IWW	Only trees that are symptomatic should be checked for insect infestation or mining damage. Non-symptomatic trees are presumed to be unaffected by insect mining.
Stem	Deformation	• The tree has two or more leaders with no dominance expressed after **three** years growth.	All	All	Leader dominance occurs when the tallest leader is at least 15 cm taller than the 2nd tallest leader. See Figure A-3

Table A-4 (cont'd). Free Growing Damage Criteria for Coniferous Trees in Single Layer Stands.

Location of Damage	Type of Damage	Tree being assessed is UNACCEPTABLE if:	Host species	Likely damage agents & damage agent codes	Comments
continued		• The pith, at any point, is horizontally displaced more than **15 cm** from the point of defect, after **three** years growth.	All	All	This pith displacement criterion is intended primarily for crooks. When applied to basal sweep, assess from the point of germination, not above 30 cm stump height, and may allow up to a maximum of 30 cm basal sweep if form is good. Use surveyor or discretion for Cw and Hw. For horizontal displacement see Figure A-2.
		• The leader has been temporarily **broken or severely kinked (~90°)**, and the main stem retains this kink after the top has become erect (not to be confused with an upturned lateral that is in the process of becoming erect).	All	Snow & ice (NY), and others	This damage is commonly caused by snow and ice, or by the gouty pitch midge (ISG) on lodgepole pine. Note: Surveyor can use judgment to fail a tree for not meeting good form even if it "technically" passes the various deformation criteria, especially for severe or repeated forking.
Branch	Infection (cankers)	• An infection occurs on a live branch less than 60 cm from the stem.	Pw, Pl, Py	White pine blister rust DSB, comandra blister rust DSC, stalactiform blister rust DSS	See Figure A-4
Branch	Gall	• A gall rust infection occurs on a live branch less than 5 cm from stem.	Pl, Py	Western gall rust DSG	Measure distance along the branch not horizontally from the stem. See Figure A-4
Branch	Gouting	• Any adelgid gouting occurs on a branch.	Ba, Bg, Bl	Balsam woolly adelgid IAB	Gouting is defined as excessive swelling of a branch or shoot caused by balsam woolly adelgid, and is often accompanied by misshapen needles and buds. It is most common on branch tips and at nodes near the ends of branches. Consult a recent distribution map to identify the geographic extent of this pest.

Table A-4 (cont'd). Free Growing Damage Criteria for Coniferous Trees in Single Layer Stands.

Location of Damage	Type of Damage	Tree being assessed is UNACCEPTABLE if:	Host species	Likely damage agents & damage agent codes	Comments
Foliage	Defoliation	• > 80% of tree foliage has been removed due to defoliating insects or foliage disease.	All	Defoliators ID, foliage diseases DF.	
Stem or Branch	Dwarf mistletoe infection	• Any infection occurs on the stem or a live branch, or • a susceptible tree is located within 10 m of an overtopping tree, which is infected with dwarf mistletoe.	Hw, Pl, Lw, Fd	Hemlock dwarf mistletoe DMH, lodgepole pine dwarf mistletoe DMP, larch dwarf mistletoe DML, Douglas-fir dwarf mistletoe DMF	**Note:** To confirm infection, the surveyor must observe mistletoe aerial shoots or basal cups on regeneration or on live or dead fallen brooms. Overtopping tree is a tree that is three or more times taller than the median height of the trees being assessed.
Roots	Root disease	• sign(s) or a definitive combination of symptoms of root disease are observed.	All	Armillaria root disease DRA, laminated root rot DRL, tomentosus root rot DRT, annosus root disease DRN, blackstain root disease DRB	Signs are direct evidence of the pathogenic fungus including fruiting bodies, distinctive mycelium or rhizomorphs. Symptoms include foliar chlorosis or thinning, pronounced resin flow near the root collar, reduced recent leader growth, a distress cone crop, and wood decay or stain. An individual symptom is not sufficient to identify a root disease.
		• Infected tree found in plot. See comments for well-spaced tree net down calculation. The multiplier for DRA is two, except in BEC zones PPdh1 and 2, IDFxh1, IDFdm1 and 2, MSdk1, and MSdm1 where the multiplier is one.	All	Armillaria root disease DRA	**Note:** All conifer species are considered susceptible. Broadleaf species are considered not susceptible for survey purposes only. Example: How to apply net down for root disease. If root disease-infected trees are found in the plot: 1. In the first sweep, determine the total number of healthy, well-spaced trees using the prescribed minimum inter-tree distance (MITD) (e.g., 12 trees) ignoring the M-value. 2. In a second independent sweep, determine the number of well-spaced infected trees (including dead infected trees and for DRT only, infected stumps) using MITD (e.g., one infected tree).

Table A-4 (cont'd). Free Growing Damage Criteria for Coniferous Trees in Single Layer Stands.

Location of Damage	Type of Damage	Tree being assessed is UNACCEPTABLE if:	Host species	Likely damage agents & damage agent codes	Comments
continued					Multiply the number from step 2 by the multiplier for the specific root disease and subtract this number from the number of susceptible healthy well-spaced trees found in step 1 (e.g., for DRA: 12-1(2) = 10). The result is the maximum number of free growing trees tallied for the plot.
		• Infected conifer found in plot. See comments for well-spaced tree net down calculation. The multiplier for DRL is four.	Fd, Sx, Se, Lw, Ba, Bg	Laminated root rot DRL	Note: Bl, Cw, Pl, Pw, Py, and broadleaf species are considered not susceptible for survey purposes only.
		• Infected conifer or stump found in plot. See comments for well-spaced tree net down calculation. The multiplier for DRT is two	Se, Sx	Tomentosus root rot DRT	Note: Ba, Bl, Cw, Fd, Pl, Pw, Py and broadleaf species are considered not susceptible for survey purposes only.
		• Infected conifer found in plot. See comments for well-spaced tree net down calculation. The multiplier for DRN is two.	Ba, Hw, Ss	Annosus root rot DRN	Note: Bg, Bl, Cw, Cy, Fd, Hm, Pl, Pw, Py, Sx and broadleaf species are considered not susceptible for survey purposes only.

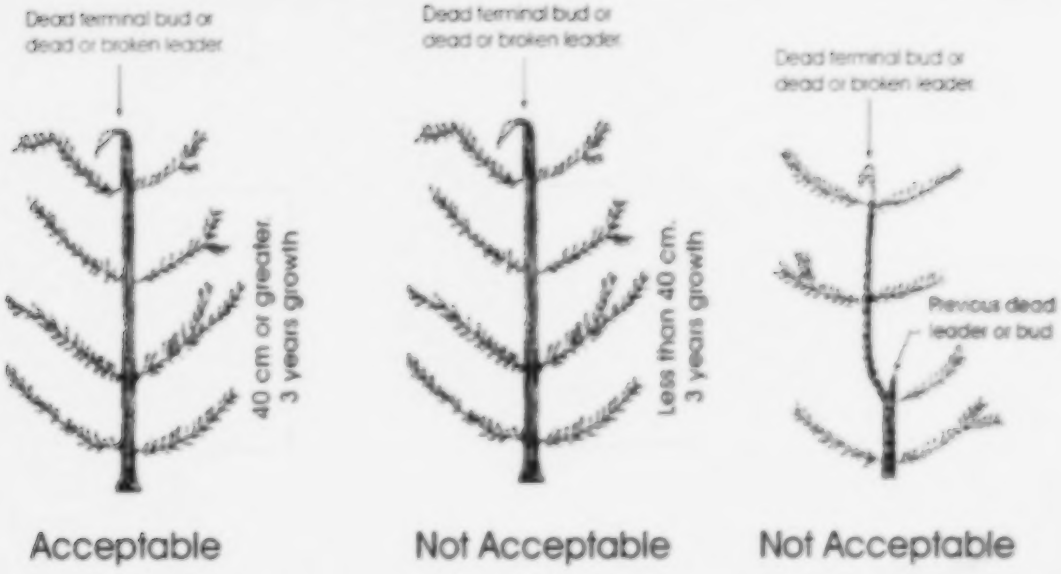

Dead terminal bud or dead or broken leader
40 cm or greater 3 years growth
Acceptable
Dead terminal bud or dead or broken leader
Less than 40 cm. 3 years growth
Not Acceptable
Dead terminal bud or dead or broken leader
Previous dead leader or bud
Not Acceptable

Figure A-1

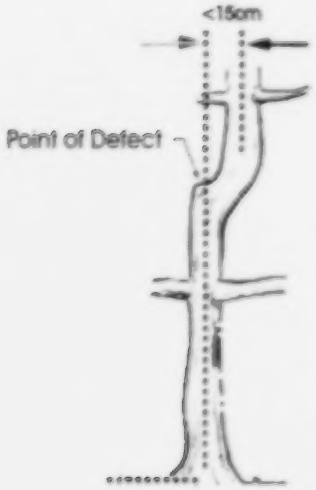


Figure A-2

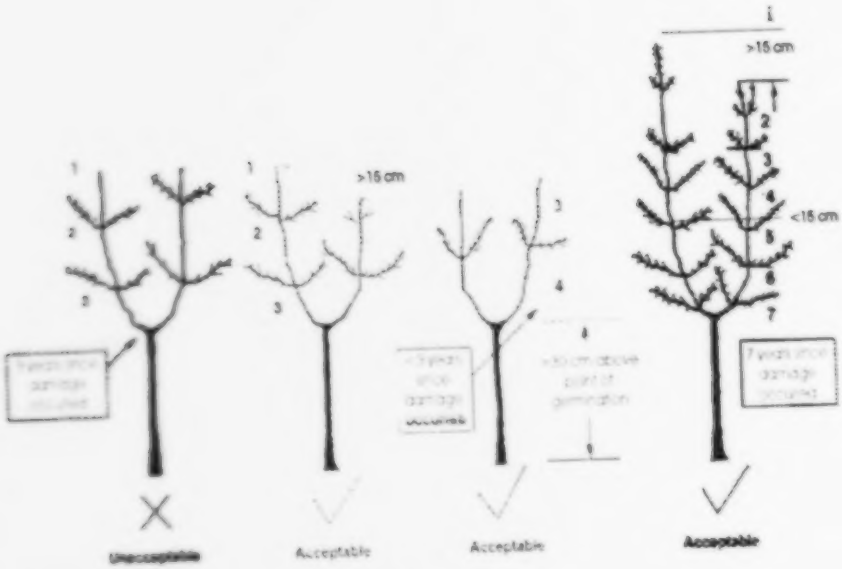


Figure A-3 Acceptable and unacceptable forks

Figure A-4 Distance measurement from point of infection by canker or gall to main stem along the stem (not horizontally)

DEFINITIONS

decay: the disintegration of plant tissue. The process by which sound wood is decomposed by the action of wood-destroying fungi and other micro-organisms.

fork: two or more leaders have originated from the loss of a leader or apical shoot. At free growing age, a fork is considered persistent if it has not differentiated in height between competing leaders by more than 15 cm after three years of growth since the leader damage occurred. Forks may provide entry points for decay fungi, are points of weakness during felling, and may create waste in the highest value first log.

gall: nodule or lump of malformed bark or woody material caused by a variety of damaging agents, such as western gall rust and some insects.

gouting: excessive swelling of a branch or shoot, often accompanied by misshapen needles and buds. Most common at nodes on branches and frequently caused by balsam woolly adelgid on true firs (*Abies* spp).

infection: characterized by a lesion or canker on stem or branches or by swelling around the entrance point of a pathogen.

injury: damage to a tree by a biological, physical, or chemical agent.

scar: a wound completely healed over with callus tissue.

wound: an injury where cambium is dead (e.g., sunscald) or completely removed. Wounds often serve as entry points for decay fungi.

FREE GROWING ACCEPTABILITY GUIDELINES FOR ADVANCE REGENERATION AND RESIDUAL MATURE AND POLE LAYER CROP TREES

In assessing advance regeneration and residual mature/pole layer crop trees, consider the following factors in preparing a site plan:

- Number of trees/ha: if advance regeneration is to be solely relied upon to restock a cutover, sufficient numbers must be present before harvest to compensate for logging and post-logging losses. A manageable stand of advance regeneration should contain total stem densities of at least twice the target stocking level to compensate for these losses.
- Tree quality: future crop trees should have good form and a healthy, vigorous appearance (i.e., good needle colour and length, no unacceptable pest damage or indicators, no major sweeps, and roots in acceptable medium). See Table A-5, and Table A-6 for single and multi layer stands and Healthy Tree Definition for FSP Stocking Standards in Appendix A for single layer stands.
- Tree height: the risk of windthrow of advance regeneration is often correlated with tree height. For example, in northern British Columbia following the removal of overstorey aspen, the risk of windthrow of understorey spruce has been found to increase dramatically for tree heights greater than 7 m.
- Height increment: Generally, trees growing well before harvest will respond well after harvest. Good post-harvest height increment is desirable, however, periodic reduced annual height growth may be acceptable when attributed to an external environmental factor (e.g., drought). Therefore, it is not always necessary that current year leader length exceed the previous year leader length.
- Age: With some species, pathological risk increases significantly with age or size. This is a feature mainly of shade-tolerant species such as Ba, Bl, Cw, Hw, or Yc. In addition, older trees may not respond as well as younger trees.
- IRM: Stems may be retained for wildlife habitat or other IRM purposes.

Site-specific factors may require that additional criteria for advance regeneration be specified in the site plan.

Table A-5 outlines the free growing acceptability guidelines for layer three and four trees, while Table A-6 outlines the free growing acceptability guidelines for layer one and two trees.

Table A-5. Free growing acceptability guidelines for layer three and four advance regeneration.

Species*	**Ba, Bl,**	**Cw**, Hm, Yc**	**Hw**		**Sx, Se, Sw**	**Fdi, Lw**	**Pa, Pli, Py**
BEC Zones	All***	CWH, CDF, MH, ICH	CWH, CDF, MH, ICH (Pr.Rup.)	ICH (other regions)	All*** (except BWBS)	All***	All***
Height at time of release	No height limit			<0.5m	No height limit		
Scars and damage	All species: No open (unhealed) injuries; no closed (healed) injuries with a horizontal width at the widest point(s), which is greater than 25% of the circumference of the tree at that point; no closed injuries that exceed 10% of the total length of the stem; no stem infection caused by a stem rust or dwarf mistletoe; no other externally visible pathological indicators including broken top, frost crack, conk, extreme basal sweep or unacceptable forks and crooks (see Healthy Tree Definition for FSP Stocking Standards in Appendix A for description of unacceptable forks and crooks)						
Continuous live crown	All species: An acceptable tree has greater than 30% continuous live crown. Continuous live crown is the length of continuous green foliage on a tree expressed as a percentage of its total height. Continuous live crown refers to foliage on adjacent live green branches that forms the main part of the crown of a tree and extends over at least half of the circumference of the tree.						
Vigour	All species: Evidence of release (i.e., generally good post-harvest height increment) – Increased leader growth is not a requirement for trees in layer three and four in partial cut situations with low basal area removal where the trees remain heavily shaded by layer one and two trees.						

* For those species not listed here, the normal free growing acceptability criteria apply. At regeneration delay, consider whether naturals will meet these criteria by free growing. If western white pine (Pw) is to be considered, consult the *Pine Stem Rust Management Guidebook*.

** Beware of sun scald. If advance regeneration western redcedar is to be used, check for incidence of heart rot.

*** All refers to zones where these species are acceptable.

For additional information regarding decay fungi and advance regeneration refer to the *Tree Wounding and Decay Guidebook*.

Table A-6. Acceptability guidelines for residual mature and pole layer crop trees.

Scars and Damage	The impact that decay fungi have on residual trees depends largely on the retention period for the trees left behind. The management objectives determine how decay fungi should be managed. The *Tree Wounding and Decay Guidebook* provides recommended damage criteria by management regime. A tree is not acceptable as a residual crop tree if it meets or exceeds the applicable level of damage as determined by the stand management regime defined in Table 4 of the *Tree Wounding and Decay Guidebook*.
Continuous Live Crown	An acceptable tree should generally have greater than 30% continuous live crown. However, for trees greater than 17.5 cm dbh (>12.5 cm dbh for Pli), greater than 20% live crown will be acceptable.
Vigour	Evidence of release.
Other Considerations	Destructive sampling of a few stems is encouraged to ensure that most of the retained stems are sound. This is critical when heart rot susceptible species are retained as pole/mature residual crop trees and are listed as *preferred* in the site plan.

APPENDIX B

FOREST STEWARDSHIP PLAN MAPS

Table B-1. Summary of FSP Maps.

Reference Map Number	Map Reference
1	Natural Disturbance Units within the PG TSA
2	PG Forest District Merged BEC Units
3	OGMA's within the Prince George Forest District
4	Herrick Special Management Unit #10
N/A	FSP Forest Development Unit Map
N/A	FSP Content Maps

BRITISH COLUMBIA

Ministry of Forests and Range

File: 10765-25 PG BCTS FSP

Date: December 4, 2005

Subject: Rationale supporting the determination for the Forest Stewardship Plan (FSP) for BC Timber Sales (Prince George Business Area) for operations conducted within the Prince George Forest District.

Purpose: To illustrate to the plan proponent, the public and First Nations, the materials and information I have reviewed and how it was applied in making my determination to approve this FSP.

Information: In making this determination, I have considered all information provided to me, which includes the following:

- Revised FSP text received on September 30, 2005 specifying results and strategies to fulfil section 5 of the *Forest and Range Practices Act* (FRPA).
- FSP maps, updated to September 30, 2005 & coalesced to a scale of 1:100,000, identifying the area within Forest Development Unit (FDU) boundaries.
- FSP companion documentation & silviculture rationales submitted in support of the stocking standards.
- Public and First Nations input (*Report on Review & Comment for the Forest Stewardship Plan - Jan. 24, 2005; correspondence with the Nazko First Nation)*
- Review memos & supporting documents completed by district staff on background information & issues for each section of the FSP.
- The record of First Nations consultation.
- Ministry of Forests & Range (MOFR) administrative guidance (*Administration Guide for Forest Stewardship Plans; Guide to the Evaluation of FSP Stocking and Related Standards; FRPA Administration Bulletins).*

Authority for Approval: I am aware of my requirement to ensure that the plan has been prepared and submitted in accordance with section 5 of *FRPA*. I am also aware of my requirement to evaluate whether or not the specified results and strategies measurable or verifiable and are consistent with the government objectives, as per section 25.1(1) of the *Forest Planning and Practices Regulation (FPPR).*

Public Review and Comment (Oct. 22 – Dec. 22, 2004)

Review and comment provisions are prescribed requirements under section 5(1)(c) of *FRPA* and are therefore tied to the approval test. However, I consider this a separate test, in advance of the general approval tests for content & consistency to ensure that the plan proponent has considered all information available to them in preparing the plan. BCTS has recorded their efforts & correspondence in the FSP supplement document: *Report on Review and Comment for the Forest Stewardship Plan; Jan. 24/05.*

I'm satisfied that the plan proponent has met the public review and comment requirements, as mandated by *FPPR s. 20-22.*

First Nations Consultation

The draft plan (text & maps) was referred to seven First Nations groups at the commencement of the public review period (Oct. 22 – Dec. 22, 2004). The Jan. 24/05 formal submission (text only) was also referred to all First Nations. I am aware of subsequent correspondence from the Nazko First Nation, directly or indirectly related to this FSP and/or consultation obligations in general (March 11; April 5; July 19; Sept. 22; Oct. 12; Oct. 31). I am also aware of the Oct. 27th meeting between BCTS (Steve Webb; Len Stratton) the Nazko First Nation (Bill Ostenstad), and Operations Division (Judy Thomas).

Based on formal & informal dialogue, I am comfortable that reasonable efforts were made to communicate the plan at all stages of development.

I am satisfied that adequate consultation has occurred for this FSP.

1) Interpretation

Although not required as FSP content, I find that the Interpretation section in the September 30th revision adds clarity to the text and does not attempt to change or modify the meaning of a provision contained in the Act or regulations. I consider this section integral to the approved plan.

2) Submission Date, Term and Commencement Date of this FSP

I note the revised submission date of September 30, 2005 and the proposed five year term, as per *FRPA s. 6(1)(a).* Consistent with the statutory authority delegated under *FRPA s. 6(1)(b),* I support a commencement date aligned with the determination letter.

3) Application of this FSP

This section defines the holder of this FSP as the Timber Sales Manager (TSM) and clearly describes which timber sale licences & road permits will come under the immediate jurisdiction of the plan upon approval.

4) Forest Development Unit

The FDU boundaries parallel the planning cell allocations *(Prince George District Major Licensee Operating Areas; May 1, 2003)* and the former *Small Business Forest Enterprise Program 2000 Forest Development Plan.* The FDU boundaries do not appear to conflict with other FSPs (proposed or approved), the *Cariboo-Chilcotin Land Use Plan* or the *McLeod Lake Treaty 8 Settlement Areas.* The text and maps clearly delineate existing sales, road permits and Category A approvals (*FRPA 196 (1)&(2),* along with land designations & rights, within the FDU boundaries. Other than for transition blocks, the FDUs do not incorporate areas on TFL 53 or TFL 30.

I am satisfied that the FSP content map requirements, as specified in *FPPR s. 14,* have been clearly presented both in the text and Appendix B (maps).

5) Results or Strategies

5.1.1.1 Landscape Biodiversity Objectives for the PG TSA

The FSP adopts the requirements of the *Order Establishing Landscape Biodiversity Objectives for the Prince George Timber Supply Area (October 20, 2004),* for old forest, old interior forest and young patch size distribution landscape objectives. This Order is defined as a higher level plan for a landscape unit under the *Forest Practices Code of British Columbia (FPC) s. 4(1) & (2).* I've noted the *PG TSA Licensees'/BCTS Memorandum of Understanding* supporting the application of the Order and defining the participating licensees. The Order makes provision for a recruitment strategy should ecological units be deficient in old forest/old interior forest threshold targets. The Order also makes provision for a rationale should young forest patch sizes be trending away from targets.

I have noted that the Implementation Policy, attached to the Order as guidance makes provision for Natural Forest Areas (surrogates for old growth in MPB stands) and encourages structural attributes & increased retention be incorporated in large block management. I am aware that BCTS does not propose any operations in the Old Growth Management Areas (Dome, Slim, Humbug), hence there are no requirement for

results/strategies. I have also noted that recent FRPA administrative guidance does not require the FSP proponent to provide the existing stand conditions or inventories in order to satisfy any approval tests for this objective.

The proposed results or strategies are deemed measurable/verifiable, and consistent with the government objective for landscape biodiversity.

5.1.2.1 OSBG for Soils

The FSP proponent adopts the exemption provision of *FPPR 12.2* and proposes a result or strategy for soils by adopting *FPPR s. 35 (soil disturbance limits)* and *FPPR s. 36 (permanent access structure limits).* I consider the FSP holder responsible for achieving the results/strategies *(FRPA s. 21(1)),* and any Agreement Holder subsequently responsible for practice requirements *(FPPR s. 106.2).*

The proposed results or strategies are deemed measurable/verifiable, and consistent with the government objective for soils.

5.1.2.2 OSBG for Wildlife

As per FPPR Section 7(2), the *Notice – Indicators of the Amount, Distribution and Attributes of Wildlife Habitat Required for the Survival of Species at Risk in the Prince George Forest District* was declared in December, 2004, for both the mountain caribou and northern caribou species. This Notice occurred during the final stages of the public review and comment period. Consequently the BCTS FSP submission incorporates this notice.

I have noted that the results & strategies propose field evaluations & specific practice requirements to address the amount, distribution and habitat attributes when planning cutblocks or roads within the FDU. I support the collaborative approach to work with recovery groups, government agencies, licensees and stakeholders in determining suitable Wildlife Habitat Areas for these species at risk, within the given Timber Harvesting Land Base (THLB) constraints. I have considered the former Ministry of Water, Land and Air Protection's (now MOE) comment that spatial mapping to support the amount included in the Notice has not been completed *(Material Supporting The Notice, But Not Part Of The Notice).* I am also aware of recent FRPA guidance that spatial definition is not a requirement for any approval tests for Section 7 Notices.

The results & strategies are deemed measurable/verifiable, and consistent with the government objective for wildlife.

5.1.2.3 OSBG for Water, Fish, Wildlife and Biodiversity in Riparian Areas

The plan proponent proposes a result or strategy, as per *FPPR 12.3,* to adopt the suite of riparian practice requirements of *FPPR s. 47-51, 52(2) & 53.* Additionally, the FSP proposes a retention result/strategy, as per *FPPR 12(3),* for all riparian management zones as described in the text & accompanying Flowchart 1.

I have noted that the retention results/strategies support the existing *FPC District Manager Policy for Management of Small Fish Streams (S4); April 23/99.* Considerable investment has been made in this policy by government agencies, licensees and hydrologists for managing the various components of water quality, fish, stream bank & channel stability and wildlife habitat. Optimum retention levels for riparian zones and large woody debris inputs are the subject of ongoing research trials, workshops and adaptive management dialogue. I note that the strategies are subject to a site-specific wind throw hazard evaluation (professional reliance), and that balancing the composite riparian objective will be a challenge at both the stand & landscape levels. The proposed results/strategies seek a flexible approach on a stand level rather than trying to manage to a minimum basal area threshold. I am also aware that riparian values & attributes are one of the priorities for the MOFR's stewardship effectiveness monitoring program.

The proposed results & strategies are deemed measurable/verifiable, and consistent with the government objective for riparian areas.

5.1.2.4 OSBG for Wildlife and Biodiversity – Landscape Level

I am satisfied that the objective for wildlife and biodiversity - landscape level has already been addressed by the superseding land use PG TSA Biodiversity Order. See my comments under 5.1.1.1.

5.1.2.5 OSBG for Wildlife and Biodiversity – Stand Level

The plan proponent has provided an alternative result and strategy for this portion of the OSBG. The holders of the FSP will comply with the practice requirements in *FPPR s. 66(1) & 67* as a result/strategy for cut blocks that are greater than 15 hectares in size. I accept the strategy to modify the practices of *FPPR 66(2)* based on the understanding that the 7% minimum will be applied to all harvesting during the twelve month period. I note that the FSP does not speak to the characteristics of wildlife tree patches, the quality of wildlife tree species or structural elements within large blocks. I conclude that this will be addressed on a site by site basis as a professional reliance matter. As with the riparian objective, this is a priority for ongoing stewardship effectiveness monitoring.

The proposed results & strategies are deemed measurable/verifiable, and consistent with the government objective for stand level biodiversity.

5.1.2.6 OSBG for Cultural Heritage Resources

The plan proponent proposes to utilize a cultural heritage resource (CHR) evaluation to survey & assess culturally modified trees, and to address the factors described in *FPPR Schedule 1 s. 4.* The results/strategies commit to communicating "development plans;" utilizing existing information, utilizing an archaeological predictive model and/or new site-specific information; and adjusting or ceasing forest practices as required.

I am aware of the concerns raised during First Nations consultation (specifically letters on the BCTS plan dated March 11, July 19 & October 31, 2005 from the Nazko First Nation). I am satisfied that sufficient steps have been articulated to conserve or protect cultural heritage resources that are the focus of traditional use and are of continuing importance *(FPPR s. 10)*. I note that, because of the nature of the resource, there may be overlaps with archaeological resources, as governed by the *Heritage Conservation Act.* As with other results & strategies within the FSP (e.g. windthrow assessments for riparian values), I accept that the use of a "CHR evaluation" and a "qualified person" lies within the purview of professional reliance.

The results & strategies are deemed measurable/verifiable, and consistent with the government objective for cultural heritage resources.

5.1.3.1 Recreation Resources

The plan proponent proposes results & strategies to abide by established recreation resource objectives, to employ variable silviculture systems & mitigation measures within 100m of recreation sites/trails (forest health issues), and to manage summer road access on FSRs related to recreation sites.

I am satisfied that the proposed results/strategies will protect the existing recreation resources (sites; trails). The prevailing MPB epidemic will undoubtedly impact many recreation investments. Since these resources entail public safety & notification concerns, it is my understanding that the appropriate Crown agency will be kept informed of impending harvesting & road impacts, at both the planning & operational stages.

The proposed results & strategies are deemed measurable/verifiable, and consistent with the government's established objectives for recreation.

5.1.3.2 Ungulate Winter Ranges (UWR)

The proposed results & strategies adopt the requirements for both UWR Orders in the Prince George Forest District *(UWR U7-003 for Mountain Caribou – Oct. 6/03; UWR U7-013 for Mule Deer – Nov.26/03).*

I note that the Sept. 30th text does not attempt to modify the existing Orders. I also note that the Ministry of Environment is in the process of converting the original "objectives language" into general wildlife measures, as required by *FRPA*. Assuming no other issues from the public review of this initiative, I anticipate no material change to the practice requirements.

The results & strategies are deemed measurable/verifiable, and consistent with the government's established objectives for ungulate winter ranges.

5.1.3.3 Lakeshore Management Zones

The FSP adopts the established designations for special riparian management zone widths for L1 lakes, based on a previous lakeshore classification *(Dec. 22, 1995 District letter)*. I note that objectives, as of this date, have not been established for any of the lakeshore classifications in the District. Hence results & strategies are not required.

5.1.3.4 Visual Quality Objectives

The FSP holder's results & strategies commit to abiding by any established Visual Quality Objectives *(FRPA s. 180 & 181)*, or to recommended Visual Quality Classes *(FPPR s. 9.2)*, for all known scenic areas. The current *Notice of Intent to Designate Scenic Areas & Visual Quality Objectives (MAL & MOFR; June 30/95)* process is still under review. I note that any result/strategy has to be consistent to the extent practicable *(FPPR s. 25.1(1))*. Where this is not possible, the FSP holder can request area-specific exemptions *(FPPR 12(3))*.

The proposed results & strategies are deemed measurable/verifiable, and consistent with the government's established objectives for visual quality.

6) Measures

6.1 Measures for Preventing the Introduction or Spread of Invasive Plants

The plan proponent commits to an annual gathering & assessment of information from applicable staff; using a criteria for Extremely High & High risk ratings for exposed soil;

seeding with grass/legume mixes within one year of disturbance; monitoring & re-vegetating (if required); using seed meeting common standards. Measures are required if a species is known to exist in an area or could inhabit the area if introduced. Measures are required if it is reasonably foreseeable that a forest practice will likely result in the introduction or spread of an invasive plant *(FPPR s. 17)*.

I find the proposal to gather information from knowledgeable sources adequate. The risk ratings for re-vegetating appear reasonable & appear to correlate with the Invasive Categories in the Regional *Pest Management Plan; 2004-2008*. It is my understanding the measures will be applied to both cut blocks and road right of ways connecting the blocks.

I find the proposed measures reasonable, adequate and proactive. I am satisfied that they meet the requirements of *FPPR s. 17*.

6.2 Measures to Mitigate the Loss of Natural Range Barriers

The plan proponent commits to annually updating range tenures information; regular communication of operational information; mitigation efforts where natural range barriers will be impacted. *FPPR s. 18* requires that the FSP holder mitigate (lessen the impact of) any negative effects resulting from removing or rendering ineffective natural range barriers. It is my understanding that natural range barriers include such things as timber stands, water bodies or other natural features that impede livestock movement.

I find the proposed measures reasonable, adequate and proactive. I am satisfied that they meet the requirements of *FPPR s.18*.

7) Stocking Requirements

As required by *FRPA s. 29(2)* and *FPPR 16 & 44(1)* for a free growing stand, the plan proponent proposes three sets of stocking standards (coniferous; deciduous; multi-layer). Additionally, variances are proposed for operations within TFL 53; regeneration & free growing dates for coniferous; free growing dates for deciduous; white pine weevil areas; riparian management near streams; Douglas fir management within mule deer UWRs.

I've noted that BCTS, in response to a review request, has provided rationales & supporting documents for height-diameter ratios (HDRs) in high pine weevil areas, for the use of non-standard minimum inter-tree distances (MITDs), and for the inclusion of tertiary species/deciduous as preferred. I accept the additional supporting information for assessing the free growing acceptability of advance regeneration/residual stocking. I am

advised that a formal modelling of the proposed stocking standards against timber supply analysis assumptions was not undertaken.

I am comfortable that the proposed stocking standards, regeneration date and free growing height have been adequately rationalized. I am satisfied that the stocking standards will result in areas being stocked with ecologically suitable species to a density that is consistent with maintaining an economically valuable supply of commercial timber. I am also satisfied that the standards are consistent with forest management assumptions that apply to the area.

As required by *FPPR s. 26(3)*, I consider the stocking standards approvable.

Summary

Results and strategies have been included for every relevant government objective (land use; objectives set by government; established objectives), and are consistent to the prescribed extent with these objectives. The results and strategies form operational commitments to achieve consistency with OSBG for forest practices on Crown land. The FSP submission meets all of the other legislated requirements for a forest stewardship plan (content maps; public review & comment; First Nations consultation; consistency with harvesting rights; adequate measures; ecologically sound stocking standards).

As the delegated decision maker, I am satisfied that the information provided for approval is adequate and complete, and that the FSP must be approved.

Greg Rawling, RPF
District Manager
Prince George Forest District

BRITISH COLUMBIA

Ministry of Forests and Range — Prince George Forest District

MEMORANDUM

File: 10765-25 PG Forest Stewardship Plan
BCTS FSP

December 5, 2005

To: Ian R. Hamann, P.Eng., RPF
Timber Sales Manager
Prince George Business Area

From: Greg Rawling, RPF
District Manager
Prince George Forest District

Re: Revised Forest Stewardship Plan Text & Maps for BC Timber Sales, Prince George Business Area

Your Forest Stewardship Plan (FSP) submission dated January 24, 2005, and revised September 30, 2005, for BC Timber Sales (Prince George Business Area) has now been fully reviewed.

Determination

I am satisfied that the proposed plan has been prepared and submitted in accordance with section 5 of the *Forest and Range Practices Act* (FRPA) and regulations. I am also satisfied that the review and comment requirements of sections 20(1), 20(2), 21(1) and 22(2) of the *Forest Planning and Practices Regulation* have been met.

Accordingly, as the delegated decision maker under Section 16(1) of FRPA, I hereby approve your FSP. A rationale in support of my determination is attached.

The term of the plan is December 5, 2005 to December 4, 2010.

Further development taking place within the Prince George Forest District portion of the Prince George Business Area must be done in accordance with the approved FSP.

If you require clarification on any aspect of this determination, please contact Larry Badowski, Tenures Officer, at (250) 614-7527.

Greg Rawling, RPF
District Manager
Prince George Forest District